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AGRICULTURAL SURVEY

MINNESOTA

1890

BY THE AGRICULTURAL SURVEY COMMISSION

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ST. PAUL, MINN.
1890

PRINTED BY THE AGRICULTURAL SURVEY COMMISSION
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A REVIEW
OF THE CORRECTED
AGRICULTURAL SURVEY
OF
LINCOLNSHIRE,

BY
ARTHUR YOUNG, ESQ.

PUBLISHED, IN 1799,
BY AUTHORITY OF THE BOARD OF AGRICULTURE;

TOGETHER WITH AN
ADDRESS TO THE BOARD.
A LETTER TO ITS SECRETARY, AND REMARKS ON THE RECENT
PUBLICATION OF JOHN LORD SOMERVILLE, AND ON
THE SUBJECT OF INCLOSURES.

BY THOMAS STONE.

SECOND EDITION.

LONDON:

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1800.

A REVIEW

TO THE RIGHT HON.

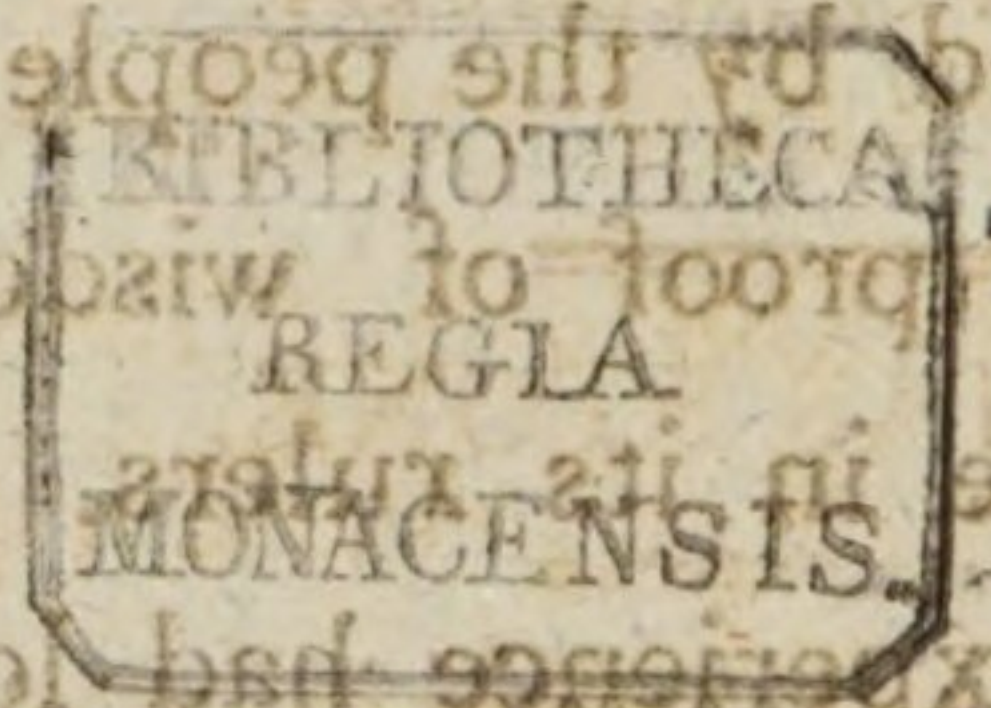
LORD CARRINGTON,
PRESIDENT

AND TO THE OTHER NOBLES AND GENTLEMEN, MEMBERS OF
THE BOARD OF AGRICULTURE

IN VIRTUE OF THE ACT OF PARLIAMENT

MY LORDS AND GENTLEMEN,

THE institution of the Board of Agriculture was viewed by the people of this country as a signal proof of wisdom and patriotic benevolence in its rulers. Philosophy and general experience had long before evinced that industry which is employed at home, in producing the first necessities of life, to be, in its most vigorous and enlightened exertion, the best support of national prosperity. But, the truths of philosophy are never otherwise than slowly and reluctantly adopted into the use of rules of civil



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policy, or maxims of common sense. And it could not but seem a propitious omen for the coming age, when they who swayed the powers of the British Government were seen to awaken seasonably from the dream of a grandeur of conquest, commerce, or colonial settlement, and to excite the nation, *by the promise of such a conspicuous act*, to cultivate to the utmost those domestic advantages which nature and the convenience of local circumstances allowed.

To collect, with incessant vigilance, the knowledge requisite to the *legislation of rural economy*,—a duty which necessarily occupies so much of the attention of Parliament; to raise agriculture, in all its branches and relations, to the dignity of a rational art, founded on principles of science, and capable of being usefully taught by the instruction of books, joined with actual practice; to excite landholders, farmers, artizans, labourers in husbandry, by *præmia*, by manuals of instruction, by the exhibition of splendid examples, and by provoking a generous, disinterested

emulation, to increase with every exertion the quantity of agricultural industry exercised in the country, and so to improve the direction of this industry that the labour of every human arm, of every horse, of every ox might afford the greatest possible quantity of produce, and that of the best quality:—these were the great functions which we earnestly expected to be, with illustrious activity, intelligence, and success, performed by the new BOARD. These functions, it was hoped, that the Board would discharge, not with the puny efforts of any single individual, not with the feeble and confined endeavours of a private society, but with an energy, a wisdom, and an enlargement of views, worthy of a national institution whose sphere of duty was wide as the British empire, and their pecuniary means, no doubt, the most ample that should appear to Parliament to be requisite for their purposes. Such were the sentiments and expectations with which the public witnessed the establishment of the Board of Agriculture.

But, I will not, my Lords and Gentlemen, be guilty of the falsehood, or the bitter irony of affirming to you, that those sentiments are still entertained, or that those expectations have not been miserably disappointed. What truly useful bill for the improvement of any matter of rural economy, has been yet introduced into Parliament, and carried into a law, upon the suggestion of your Board? When, on any emergency, Ministers have asked information from the Board of Agriculture, have they not been forced to confess, that they were deceived and misled by its Reports? Has our general system of rural economy and police been at all ameliorated by any diffusion of useful knowledge or happy example from your Board, as from a grand central source? Are those books which you have published, in any instance, fit manuals of practice, or store-houses of science or experience? Or, do your office chests contain any accumulation of precious receipts which would make the fortune of a private farmer, if he could but lay his hands upon them?

Why has your scheme of forming, in a set of COUNTY REPORTS, a collection of materials for the present history of British husbandry, been carried, in almost every particular instance, so languidly and lamely into execution? Why has it been interrupted, as if the mysteries it was meant to display, were not to be brought further into light? The world would not have believed that you were in possession of so little accurate information concerning the causes and the true state of the present scarcity and dearth of provisions; if your Secretary had not been suffered to divulge your *official* ignorance and his own, in a pamphlet which respect for you, if not concern for his own ill-earned literary reputation, should have forbidden him to make public.

I will avow, my Lords and Gentlemen, that there was once no person more sanguine than myself, in the hope of great public good to be derived from the exertions of your Board; or more earnestly desirous of humbly contributing to advance what I naturally

conceived to be its proper views. At the request of Sir John Sinclair, then your President, and still one of your number, I undertook to prepare a sketch of a report of the rural economy of the county of Lincoln.* That paper was presented to the Board, and printed for private circulation in the county, in the year 1794. It was brief, and was intended rather to afford, according to your common plan for these reports, the groundwork of a future, more ample, and more elaborate one, the result of fuller and more satisfactory information, than to give, in the first instance, a history admitting no corrections nor additions, of the husbandry of an extensive county. Even to myself, that paper appeared exceedingly imperfect; yet, with imperfections which bespoke not so much absolute inability in its author, as the want of that farther knowledge of facts which its un-

* Reports of the Agriculture of Huntingdon and Bedfordshire were also presented by me.

published circulation was intended to procure. I waited, therefore, with considerable impatience till those returns should be put into my hands, which the Board had reason to expect from gentlemen to whom copies of my paper were transmitted ; and, in the mean time, used as much diligence as my other avocations would permit, in order to collect new information, from every respectable source to which I could have access.

But, while thus employed, I to my surprise learned, that your Secretary, in person, was dispatched down to Lincolnshire, to make a new survey of that county ; that my short sketch had been judged incapable of being improved into any thing like a satisfactory final report ; that the very remembrance of such a paper was to be abolished by the publication of a survey of the agriculture of Lincolnshire, in which honour would be done to no authority but that of Mr. Young himself, and those who might

be particularly concerned with him in the fabrication of his book.

I was, indeed, concerned, that a labour which I had executed with some care of investigation, and, I will venture to affirm, with patriotic honesty of intention, should have been judged so little adequate to the end I had in view. I was disappointed of a pleasure I had promised myself, in revising, correcting, and enlarging my sketch for the public eye. But, believing that Mr. Young might accomplish the task in which I was interrupted, with advantages which I could not have commanded, and might do extraordinary justice to the state of the rural economy of the county of Lincoln; I was, in the whole, inclined to rejoice that the business had been devolved entirely into his hands. I waited with impatient, but candid and liberal curiosity, for the appearance of his work. Far, however, from lying on the watch to criticise and abuse it; I was prepared to overlook petty defects, which experience had taught to be not easily avoid-

able ; and, if with any truth I might, loudly to bestow a praise which from me might be the more welcome, as my own enquiries had, in this case at least, furnished me with intelligence by which to judge.

The work of Mr. Young at length appeared. It was bulky ; and was ushered into the world with not a little of the confidence of extraordinary merit. I shall not here enlarge in relating with what astonishment and disappointment I perused it, nor with what contempt and indignation it was received by the public. But, instead of contributing to recover to your Board that public favour which it had at length almost wholly lost ; *are you not yourselves sensible,* my Lords and Gentlemen, that this publication has only tended to bring new disgrace upon your authority and exertions ? And if it had established any thing like truth of science, or the sound sense of the practical farmer ; if it had shewn diligence of enquiry, or caution in weighing the credibility of the information obtained ;

if it had presented, in any reasonable degree, either a full or a true representation of the state of the husbandry of Lincolnshire; had it, any where, praised that which was deserving of praise, or blamed that which, for its amendment, ought not to be passed over without blame; did it afford any judicious directions for the amelioration of the rural economy of this highly improveable county; or were there in it any advice not pregnant with mischief to the farmer or landlord who shall be so weak as to follow it: I should not, my Lords and Gentlemen, have troubled you with this address, nor the public with the subsequent remarks.

But, since I cannot dissemble my knowledge of the dangerous imperfection of Mr. Young's work; and as I am in possession of information which may enable me to prevent some of the mischief that might follow it; I have thought it my duty, to offer the following review of that work to you, and to the world. In composing it, I have been par-

ticularly careful to state only the truth of facts, and the cautious deductions of experience.

I have, without scruple, quoted my own Report wherever it appeared to contain statements which might be here brought forward with advantage. I have found myself obliged to descend into details which will, occasionally perhaps, be less interesting to the public in general, than to the inhabitants of the county of Lincoln. I scorn the contemptible pride of triumphing over the errors and the inability of your Secretary ; and have therefore assailed him on no point where I did not conceive that serious mischief might be produced by his errors. With such an example before one, it were no easy task to write elegantly or correctly. I have, however, endeavoured to write so clearly that my meaning might be without difficulty understood, and with animation sufficient to hinder the reader from falling asleep over my pages.

My Lords and Gentlemen, I presume to address this composition to you ; because you ought to know, particularly, the imperfections of that account of Lincolnshire which you have been so far misled as to suffer to be published under the sanction of your authority ; because I earnestly wish to see the BOARD OF AGRICULTURE rise while you are its members, and under the Presidency of LORD CARRINGTON, to its proper dignity and usefulness ; because, though I cannot deny that your proceedings have not hitherto been adapted to command, in any high degree, the respect or gratitude of your country, I will not yet relinquish the hope of the most signal advantages to result from your future efforts. I have addressed you, without flattery or ceremonious circumlocution ; for it is not in my nature to speak otherwise than with ingenuous plainness ; and I suppose you are yourselves willing to allow, that if the truth had been at all times more perfectly told, in answer to your

enquiries, the objects of your institution would have been before this time much more effectually attained.

I have the honour to be,

With great respect,

My Lords and Gentlemen,

Your Obedient Servant,

THOMAS STONE.

London, July 31, 1800.

the objects of your institution
 should have been before this time much more
 effectually attained.

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With great respect,

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IN THE SENATE OF THE UNITED STATES

REPORT

OF THE SELECT COMMITTEE ON THE SENATE

ON THE REPORT OF THE

COMMISSIONERS OF THE LAND OFFICE

IN RESPONSE TO A RESOLUTION

PASSED BY THE SENATE

ON THE 15TH OF MARCH

1846

AND

ON THE REPORT OF THE

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1846

INTRODUCTORY ADDRESS

TO

MR. ARTHUR YOUNG.

I DO not consider it a duty incumbent upon me to begin this address with a prolix apology. You, of all men, have the least reason to expect a ceremony of this kind, since you have invariably commented upon the agricultural productions of others with the most unrestrained freedom. You have, Sir, long assumed to yourself the office of a Reformer, and if your talents as an Agriculturist had been equal to your industry in travelling and writing, you would long since have ranked amongst those to whom the present and future ages of the world are and will be ever indebted for the extension of that science most beneficial to mankind. But, Sir, unfortunately for the country and yourself, you commenced a Reformer before

you had acquired any practical knowledge of the subject upon which you had undertaken to treat.*

You, Sir, necessarily reported what you heard from others, without the benefit of trying it by the touchstone of Experience; and in your early peregrinations, you acquired a habit, which has not deserted you upon the present occasion, of recording every thing which was told you, without discrimination, and leaving it for others to take the trouble of extracting the little that is valuable from the voluminous mass of rustic jargon which we here find committed to the press. This office I have undertaken with respect to your publication upon the Agriculture of the County of Lincoln. How far I shall acquit myself will remain for the decision of others, and whatever errors I may commit, I want

* This gentleman was, at about the age of seventeen, put out apprentice to Messrs. Robertson and Day, Wine Merchants at Lynn, in Norfolk, with whom he continued until he commenced practical husbandry upon his farm in Suffolk.

of candour towards you, or an intention of misrepresenting any of the subjects upon which you have treated, will not, by men of common honesty and discernment, be imputed to me. I had, Sir, the honour of a commission similar to yours from the first President of your Board, to prepare a General Report of the Agriculture of the County of Lincoln; but my exertions were limited to a short time, and to a form and mode particularly prescribed by him, a form and mode which had been adopted and approved by the Board for the County of Huntingdon, and afterwards for many other counties. The prefatory paper to those reports, as it is very short, it may probably be more explanatory here to insert.

‘ TO THE READER.

‘ It is requested that this paper may be returned to the Board of Agriculture, at its Office in London, with any additional remarks and observations, which may occur, on the perusal, written on the margin, as soon as may be convenient.

‘ It is hardly necessary to add, that this

report is at present printed and circulated, for the purpose merely of procuring farther information respecting the husbandry of this district, and of enabling every one to contribute his mite to the improvement of the country.

‘The Board has adopted the same plan in regard to all the other counties in the united kingdoms, and will be happy to give every assistance in its power to any person who may be desirous of improving his breed of cattle, sheep, &c. or of trying any useful experiment in husbandry.’

Conciseness was at that time the object of the Board, and the wide margins of the publication were expected to be filled up with useful hints and observations from practical husbandmen, and returned to the Board. How far such a measure was productive of the effect desired remains a secret from me and from the public. You, Sir, have disdained to avail yourself of any such hints or observations, if any such were made and returned to the Board; at least this appears to be the case, as you have scarcely made allusion

to any ; perhaps you preferred to gather them from the convivial discourses of market ordinaries, in all the freshness of originality. My report was published under the inspection and with the approbation of the Board of Agriculture, and at a time the public understood you were receiving 500l. per annum as Secretary ; of course you either received your salary as a sinecure, or could not be unacquainted with the subjects which were then under discussion. It appeared to be the design of the Board to rouse the torpid spirit of the practical agriculturist, to excite a discussion of the various subjects in which he was most interested, and to invite those persons who considered themselves as touched too closely to make their appeals to the Board in the manner they were required ; and not to issue their scurrilous pamphlets against me, who was merely acting the part of an agent, and who ought to have been shielded from any personal virulence. I cannot give the public a better proof that the materials of which my Report of the Agriculture of the County of Lincoln was composed, as well as

that the arrangement of them was exactly what Sir John Sinclair, the then President, approved, than by inserting the following note.

Edinburgh, 15th November, 1793.

‘SIR JOHN SINCLAIR has the pleasure of informing Mr. Stone the printing of Lincolnshire is in considerable forwardness, and the Report, he is persuaded, will do credit to Mr. Stone’s talents, industry, and zeal in the cause.’

Having ascertained, without any possibility of doubt, that my Report was exactly what was required by the Board, it follows of course, that either it did not produce any of those marginal observations which were expected, or that you disdained to avail yourself of them, and rather chose, as before observed, to open a new agricultural account of the county of Lincoln for yourself. But to the causes by which you were influenced I am perfectly indifferent. I feel no sentiments of a vindictive nature, though I suspect myself to have long been the object of your dislike. This is in some degree proved by your re-

view of my Essay on Agriculture, published in 1785, as it stands recorded in the fourth volume of your Annals. Without trespassing far upon the time of my reader, I hope I may, without any particular charge of egotism, say a few words upon that subject.

You have there called upon me for proofs of the experiments upon which my opinions and assertions were founded, though at the same time you must be conscious of the little right you, of all men, had to make such a requisition, and must know, that with the discerning part of mankind, who might do me the honour of reading my book, it would soon be discovered which of us had the greatest pretensions to a proficiency in practical husbandry. I did not condescend then to give you a reply: but since you have given me a fresh cause to notice your publications, I feel it a duty to myself to take up my pen: and before I proceed any farther it may not be improper first to state what kind of education is required to form a practical husbandman.

With deference to Mr. Young's judgment, I presume it must be one who, after having

received an education best suited to agricultural pursuits, possesses taste for attaining perfection in the science, one who has been placed for four or five years, at that period of life in which you were apprenticed to a wine-merchant, with a farmer of experience in some county where the art of tillage has made the greatest progress. At this time, the mind, not yet trained to professional habits of any kind, or involved with the cares of life, receives with readiness whatever instruction is conveyed to it ; and, first impressions being the strongest, the seeds of knowledge take then the deepest root in the understanding, and mark the future direction of the man. He is not only then more acute, active, and vigilant, but, when the practice into which he is initiated is peculiarly suited for grafting on his previous education, he proceeds with perseverance and delight, without deviating to either side, in the same path which his early habits prescribed ; and thus the sooner arrives at the knowledge which he pursues. A youth of eighteen or nineteen observes, watches, examines, and actually employs his time in

the various movements of the business and the different operations which are occasioned by the vicissitudes of seasons, for a series of years. And if his situation shall not afford him an opportunity of seeing the operations of practical husbandry upon different soils, it is required that he should change it for such as will. By this mode I have the satisfaction to tell you I laid the foundation of a knowledge of practical husbandry with a very eminent farmer in Norfolk, and afterwards put the knowledge I had thus acquired into practice upon 1300 acres of land at Tong, in Shropshire. Mr. John Bishton, a very eminent agriculturist in that neighbourhood, will tell you, that not only that estate, but the country received some benefit from the examples of good husbandry which were there introduced. Soon afterwards my pursuits were directed to more general objects, as a Surveyor and Valuer of estates; and I may venture to assert with truth, that I have never since passed over a piece of land without contemplating its condition, the means by which it acquired that condition, and the probable

expedients that might be employed for its improvement. In the further progress of this pursuit, I shall find frequent occasion for, and shall avail myself of the opportunity of noticing some of the subjects of criticism on my Essay on Agriculture, with such extracts as will preclude my readers from any reference to the book. I shall only beg leave in this place further to remark, that it passed the ordeal of more profound, and, I presume, more disinterested critics than Mr. Young. The Critical Reviewers, a society of gentlemen whose reputation has for a series of years been very high in the estimation of the public, and will last when the works of Arthur Young and Thomas Stone shall have perished amid the fuming orgies of a beer club, or the paper shall be regenerated from their daubing, by the Neckenger, to be employed in the *more valuable* communications of the Board of Agriculture, gave their opinion of the book in the following terms :

‘ The simple candour and plain good sense which seem to have dictated the contents of these pages must render them highly es-

timable to gentlemen of landed property, for whose use the volume was written. The great object is to inform them to what points their attention is to be directed in leasing their estates, or intrusting more generally their concerns. This leads our author into many miscellaneous considerations relating to husbandry; and his remarks, though seldom very new, are commonly just. What we mean by new is, that no particular plan is recommended, which had not been before practised; but this is less the design of the author than to apply what is already known to the use of those for whom the essay is designed. We read with particular pleasure his observations on the breed of cattle, and on the improving stock of horses, for he does not push his opinions precipitately with the zeal of a reformer, but recommends with the calm discretion of an experienced observer. The shape, the form of animals must be in a great degree connected with their general health, and that again must influence the time required to fatten them,

and their state when fat. The observations on husbandry are calculated to preserve the estate in an improving condition, by accurately ascertaining the mutual claims and interests of the landlord and tenant. In this way the rent is only the annual price paid for the use of the land ; it is not a deduction from the real value, which it must be when, at the end of a term, the estate is left in an impoverished condition.

“ There is no set of men, (says our author) I have a higher esteem for than farmers, but I must confess that no set of men know better how to make a bargain for their own advantage. A steward ought to be careful how he allows the custom of any country, for there is a good and a bad one every where. For instance, where a farmer is allowed to take only two crops and a fallow, and after fallow, turnips and barley, which is generally esteemed good husbandry, he can manage his farm so that at the end of a term he will have sowed all his land with a successive crop ; or having taken two crops, the whole

will be fallow by the incoming tenant in his first year, which will be an insuperable objection against any man's hiring it. Indeed the like advantages may be taken throughout the whole of a lease, loosely and injudiciously made. And were the case to be litigated, in which a tenant had taken two crops, and left all his land to be fallowed, it might be determined in the tenant's favour, he having only taken two crops to a fallow during his term, according to agreement; therefore a man, who is a good judge of the properties of land and its condition, will frame covenants suitable to each case, in order to remedy such an evil. For instance, a farmer should be bound not to crop more than a certain proportion of his arable land, with the same kind of grain, in any year of the term; not to sow a second or successive crop upon more than a certain proportion thereof every year, after which he should be constrained to fallow, manure, and sow turnips or close-seed, and to lay the same down

with artificial or natural grasses for such a limited time as should be approved.

“ In some cases it might be adviseable for a farmer to covenant to lay a proportion of his farm down for perpetual pasture at the commencement of the term, and to lay other parts down at stipulated times during the lease. However, it is a landlord's business to improve the value of his estate, not only at the end of the term, but during the occupation ; yet the great view ought to be directed to the end of the term, that the value of the land may not be reduced, but improved and made desirable for a tenant to continue thereon, or others to take it.”

‘ We have selected this passage as an instance of the plainness and simplicity of our author. We have selected it too, as we trust it will recommend his performance, and perhaps himself, to those most interested in similar concerns.’

These gentlemen understood my intentions perfectly from reading the book, and, without the help of any further information,

discovered that its author was a practical husbandman. The establishment of a Board of Agriculture was not a scheme that originated either with Sir John Sinclair or Mr. Young. I recollect noticing not only the expediency, but the importance of such a measure, without any pretensions to originality, in my publication in 1787, entitled ‘Suggestions for rendering the Inclosure of Common Fields and Waste Lands a Source of Population and Riches:’ from which I beg leave to introduce here the following extract:—

‘Whoever candidly takes into consideration the quick and easy communication all parts of England have with the metropolis, the increased magnitude of that city, the perfection to which our manufactures have been carried within the last sixty years, the luxury of the higher order of the inhabitants, and the increase of population, will not long be at a loss to account for the increased price of provisions, without charging much to the account of a few inclosures, injudiciously

managed; whilst it is clear, to the conviction of every man of candour, who is acquainted with practical husbandry, and has lately travelled through the different parts of Great Britain, that agriculture, in point of improvement, has not kept pace with manufactures and commerce. A great deal of this delay must be charged to the score of an advance of rents in the present age, without a general attention to the binding the occupiers to improve the property committed to their management, and to preserve it in tenantable condition; or to gentlemen of landed property not granting leases or inviting them, by example, to such improvements as might be compatible with each particular soil and situation.

‘ Instead of which, it is now a general practice, and more especially upon the major part of new inclosures, for occupiers to hold more land than they are enabled, in point of property, to stock and manage to the best advantage; and, in consequence thereof, they are induced to pursue their immediate

interest only, by neglecting the advantages to be derived from improving the breed of cattle, and the repeated cropping of the land, without looking forward to its future condition: and to the farms being thus less productive, and many seeming trifles neglected, may be truly attributed a part of the causes of the present high price of provisions.

‘ Many gentlemen of landed property do not rightly estimate the real advantages to be derived from their estates; they are generally content if their rents are punctually paid; and whilst they have no view towards the immediate advance of them, the landlord and tenant go on very smoothly; and where estates are let at much less than their real value, very few incidental losses are sustained by the proprietor, and of course very few difficulties are created: but where farms are let to their full value, needy adventurers, or injudicious occupiers, sometimes get hold of them, reduce the condition of the land, and leave it for the proprietor to try his skill upon for a few years; yet, most assuredly,

every gentleman of landed property, who is a well-wisher to his family, and to his country, whether he lets his land dear or cheap, is so far interested in the cultivation of his estate, as to desire that its product should be the largest, and most valuable it is capable of bearing; for as agriculture is the great foundation upon which manufactures, commerce, and every good is to be sustained, the more abundant product of the land must go towards the reduction of the price of labour and manufactured goods, the rates for the maintenance of the poor, and, in an innumerable number of indirect channels, towards the reduction of the land tax. Although the rent of a farm shall remain exactly the same as when the respective land upon which it is charged was less productive, yet, as the increase of the produce of it will be the means of reducing the price of labour, manufactured goods, and many expences ultimately charged upon the land, the proprietor's money will go the farther at market; and those advantages will operate upon the pro-

prietors, the tenants, and the community, as an enrichment of the whole. A due attention to these hints I must recommend as the way to produce riches and prosperity to this country: and yet agriculture does not make the smallest part of the education of the modern gentleman, nor even of those who ought to be most concerned for its success.

‘ There is not a more common circumstance in England, than that upon a gentleman’s arrival from his travels, and coming into possession of extensive landed property, he should be totally ignorant of its condition, and utterly unable to inform himself, from his own observations, whether the ready money put into his hands is made by honest savings from an estate improved and preserved, or whether it has not been hoarded in a napkin, in delay of necessary repairs and improvements, from which seven-fold advantages might have been reaped. The time is not far distant when gentlemen of landed property will feel the necessity of

paying more attention than at present to this great source of national strength.

‘The Society for the Encouragement of Arts, Manufactures, and Commerce, in the Adelphi, however laudable their designs, will be incapable of making so rapid a progress in improvements as the country stands in need of, unless they are supported by the united efforts of all gentlemen of landed property; and to bring agriculture to the highest state of perfection it is capable of, societies must be formed by the gentlemen of each respective county, to encourage it by premiums for different classes of improvements in farming and the breeding of cattle.’

Nothing warps the mind from its proper bias more than enthusiasm. Objects not unfrequently appear the reverse of that which they really are. It is on this account that you are disposed to call even the practical husbandman a theorist. If we turn our observations to Bradfield Hall Farm, in Suffolk, the *seat of your improvements*, the

most useful lesson of practical husbandry may be instantly learnt by adopting the contrary of your example. Were the practical husbandmen of Suffolk, within the circle of your fame, questioned by an inquisitive traveller respecting who was the worst farmer in the county, they would immediately answer, Arthur Young.

If you had travelled ten times more than you have done, and written ten thousand volumes upon agriculture, not having been grounded in the knowledge of practical husbandry before you set out, you would have continued only to heap theory upon theory, without adding a mite to the general stock of practical knowledge. And here I must pause for a moment, to inform you of the general tendency and scope of your writings. As you wanted that useful and indispensably necessary information before you began your travels, you had it not in your power to correct what you heard by what you saw, and you became the dupe of every sly, artful knave who proposed to himself either interest or pleasure in misleading you. Hence

the innumerable exaggerated accounts in all your tours and travels, of crops that never were reaped, and improvements in cattle that never existed ; and whilst I give you credit for the purity of your intentions, I cannot help remarking that, by all the practical husbandmen who have traced you in your eccentricities, and compared your writings with the true statement of facts, you have been considered as the Munkhausen of the age. This circumstance has, for many years, been so well known to the cultivators of the soil, that you had not, happily, the power of misleading them. The only effect your works have produced has been to make them, in a great measure, reject all writings upon the subject as wild and chimerical.

Nevertheless I must pay a just tribute of respect to a periodical work called the ‘ *Annals of Agriculture*,’ compiled by you.

Considered as a repository of the reports and opinions of experimental farmers, it is a work of great public benefit ; but merely of entertainment, where your own theories are introduced. In a correspondence that I had

with a nobleman of well known and deserved celebrity upon agricultural subjects, he made some observations which may not be considered inapplicable in this place, and therefore I add the following extract.

‘ The example of a person of his Grace’s* abilities and rank will do more to promote what is useful than all the cursory surveys and weight of letter-press of the Board of Agriculture. Their late President, Sir John Sinclair, mistook matters most confoundedly. It was not words or paper that was wanting but new ideas. He wished to attract notice and to work himself into fame by much writing, as the Pharisee, in the Bible, did by long prayers. As to the present President,† I do not know that he has any other merit, or possesses any one idea as to agriculture, further than in ploughing with bullocks instead of horses.

‘ As to Arthur Young, the Secretary, he is well known, he has written the most on agri-

* The Duke of Bedford,

† Lord Somerville.

culture, and is the worst practical farmer in the kingdom. Therefore, if you take my advice have nothing to do with a Board from which so little benefit is to be expected to the agriculture of this kingdom.'

I shall not here advert to the motive you had for rejecting or disregarding my Report upon the Agriculture of the County of Lincoln, published by the Board, until I have proceeded a considerable way in my comments on your work.

Perhaps it may appear in the course of these remarks, that you rather chose to omit the mention of objects of the greatest consequence than to make the least allusion to my treatise.

The main subject of that tract remains, therefore, uncontradicted, in the forming of which I have not, under any circumstances, an individual to blame. I sought no opportunity of consulting the opinions or reports of others. I understood my instructions from the President of the Board to be the return of my own observations, unfettered by the prejudices of others. And as the pub-

lication was generally distributed, and all descriptions of persons interested in agricultural pursuits were invited to make marginal or other observations, I considered that as the most likely means of extracting and bringing forward the truth. I but too well knew the agricultural mania that is now abroad, and that many very sensible men are not exempt from it ; men who are desirous of being considered by the public as great agriculturists, though they do not know a ploughshare from a weeding hook, and whose estates are managed more like forests than lands of a cultivated country.

That you did not find an opportunity in returning from your survey to take a view of your own farm, will not be a matter of surprise, when we contemplate its condition ; and that you could not even, in returning from the neglected county of Lincoln, cast an eye over it without some strong symptoms of internal conviction, that he who sets up for a reformer ought not to stand most in need of reformation. It is a little remarkable,

Sir, that since the publication of your *second* political pamphlet, and your having been appointed Secretary to the Board of Agriculture, you should have described the subjects of the Agricultural Reports to be perfectly innocent, because they are not supposed 'to carry any thing of taxation in the result.' Although the observation was not a little severe upon your new political friends, it was certainly going much further than you had a right to travel. It is impossible to say what use shall not be made of such a body of information, when properly collected and digested. Since we are in a situation that requires very extraordinary taxation, it will most certainly best tend to the public advantage, to use any means of information that are calculated to render the burthens proportionate to the strength of the shoulders that are to sustain them.

S.

A
REVIEW
OF THE
AGRICULTURAL REPORTS
OF
LINCOLNSHIRE.

CHAP. I.

GEOGRAPHICAL STATE.

SECT. I.—EXTENT.

MR. YOUNG does not possess any tolerable degree of accuracy in his arrangement of the different descriptions of soil in this county, and it appears that 718,030 acres, under the head of miscellaneous, are left for his readers to consider as wolds, heath, or low lands, as shall best serve the purposes of calculation. This gentleman has wonderful powers of arithmetic; his calculations are generally made in a retrograde ratio. He first fixes upon the result or deduction, and then traces back to the data.

SECT. II.—DIVISION AND FACE OF THE
COUNTY.

THE low lands here adverted to were far from being in a sound and fertile state at the time Mr. Young made his survey, or why a necessity at that time for the South Holland Drainage? Had he asserted this tract to be capable of being made one of the richest in the kingdom, he would have been nearer the truth. The proprietors of it would have been much obliged to him had he suggested the best method of draining it: for there are those, who possess some judgment, who are of opinion that the present great works will fall far short of that desirable end. The further extended rich tract towards the Humber is not only subject to receive the high land water without the means of competent drainage, but also the ill effects of breaches of the sea bank, which render it by no means so fertile or profitable as Mr. Young, in his cursory view of the subject, seems to describe; and I may venture to assert, that the whole extent of

the low land here described by him is not so profitable by one half as it might be made, by judiciously expending the improved rent of one or two years upon its drainage and embankment. The censures Mr. Young has heard on the county of Lincoln, with respect to the beauty of its scenery, 'from persons who have viewed only the worst parts of it,' cannot be wholly done away by his representations. He has gone into the other extreme, in speaking of rich plains of meadow as 'all alive with great herds of cattle.' Viewed at another season of the year, they would, even for months together, appear covered with water to the depth of several feet, and, perhaps, 'all alive with fish,' for want of a proper drainage, which might be easily effected.

If Mr. Young was not hurried along by an overheated imagination in describing the beautiful views of Lincolnshire, he certainly would not bring in Lynn, the Norfolk Cliffs, or Nottingham Castle: these places are not in the county. He must have stood on very high ground when he saw them, and the inter-

immediate space possibly might be as barren as the rocks of the Island of Ascension. With the like fever in his imagination, he sees beautiful woods upon Lord Middleton's and Mr. Angerstein's estates, which are *yet to be planted*; and *delicious lakes* at Croxby and Stainton, *yet to be made*.

This mode of discovering beauties in embryo might well become a Driver or a Repton,* but surely does not accord with the grave character of an agricultural reformer.

There is a circumstance very striking in most of the beautiful views which Mr. Young has discovered in the county of Lincoln in his summer excursion:—That in the winter season the eye must, in most directions, pass over many thousand acres of land covered with water, before it can reach a pleasant object on which to rest. And the

* These gentlemen are very eminent for their taste in beautifying parks and pleasure grounds.

intelligent mind must mourn over the devastations which are daily committed by the too frequent failure of attempts at drainage.

Thus large tracts of land, in their nature highly fertile, are constantly overflowed; and too frequently large capitals of personal property are swept away.

That there are some beautiful spots described by Mr. Young, cannot be questioned; but it is to be lamented, that many of the plantations alluded to are of the fir tribe, without a judicious mixture of forest trees to succeed them, and plantations of this kind soon turn the point of beauty, and are applied only to the economy of the farm.

The hill above Dalby to Spilsby is certainly a very beautiful scene; I have often viewed it with delight in a summer's evening, and it became more captivating after passing over the dismal fen from Boston to Spilsby; but the rich inclosures Mr. Young has mentioned within view of this hill, as 'abounding with springs,' stand much in need of the Elk-

ingtonian system of drainage, to improve them.

It would be an act of benevolence in Mr. Young to introduce Mr. Elkington upon this spot. May we entreat him to take that gentleman in his next tour through Lincolnshire? or is he made gross and cumbersome by luxuriantly feeding on the gratuity voted him for discovering his mighty secret?

Near to Dalby is Well, the seat of Mrs. Dashwood, esteemed by the Lincolnshire gentry to be one of the most beautiful situations in the county. I am surprised Mr. Young did not visit it. The present possessor, though a lady, and far advanced in years, would have given him a good sample of Lincolnshire hospitality, and would have desired her Steward to shew him her beautiful grounds, plantations, and farms.

SECT. III.—CLIMATE.

It must appear very extraordinary to the generality of Mr. Young's readers, that, immediately after the Witham drainage, the

climate was rendered more aguish than before. Permit me to ask Mr. Young what inference he expects his readers to draw from the above statement? Assertions of this sort, without *assigning some cause*, or giving some proof, may surprise, but cannot convince an intelligent mind.

If he mean merely to amuse his readers by such assertions, I hope he will in his future writings put the initial M. to such paragraphs. We may, however, easily infer his alliance to Munkhausen without such a mark. The Poet tells us that

‘A little learning is a dangerous thing.’

Mr. Young tells us that

‘A little drainage is a dangerous thing.’

If Knaith, near Gainsborough, was that precise point in this county which might be considered as the medium of its climate, a particular account or register of the weather there might answer purposes of utility. But

it is not asserted that Knaith is that medium point of climate; therefore the account of the weather there, without giving the public similar observations, made in like manner in other parts of the county, proves nothing, and seems to be inserted merely to fill one of the 455 pages now under consideration. In order to heighten the paradox, that the Witham drainage increased the ague in Lincolnshire, we are here informed that the drainage of Wallin fen, in Yorkshire, (at least thirty miles from the north-west corner of Lincolnshire, across the Humber, one of the largest rivers in England) cured the ague there.

SECT. IV.—SOILS.

MR. YOUNG expatiates very largely upon this head; and no doubt there is an ample field for it, because every description of soil in the kingdom may be found in this county. Indeed soils are so variously intermixed, that in abundance of instances within my knowledge, one and the same parish affords several

very opposite kinds. Mr. Young has enumerated many particular places; but the sum of them does not amount to one-fiftieth part of the whole county; therefore, those who are well acquainted with it would judge that he has not sufficiently viewed its various parts, to be able to form a general idea of the whole. He mentions under this head particular districts and soils which are too various for description: and therefore a man, who is not fond of much writing, would not waste his time and his paper upon it, unless he was enabled to be more particular.

SECT. V.—WATER.

It is a mortifying circumstance to many of the inhabitants of this county, that in many situations where they are almost ruined by this element in winter, they are grievously distressed for it, even for the most common purposes, in summer. The northern, and several other marshes and fens, in summer, are commonly dry; and rich marsh land, which would feed a bullock an acre, for want

of fresh water for the cattle in that season, becomes of but little value.

The only fences between field and field are ditches, which, when dry, admit an intermixture of stock, to the great detriment of the graziers. It is expected from such men as Mr. Young, that in a survey *of the nature of that he has undertaken*, he should not only observe the evil, but suggest the most probable and efficient remedy; by which means the landed interest would be highly benefited, as well as the community at large.

There are many situations in the marshes of this county where excellent springs of water are found; and I particularly noticed a very good spring at Scupholme, near Saltfleet, on a *leased* farm belonging to General Manners, in the occupation of Mr. Paget. Near the summit of the sea bank, in the parish of Theddlethorp, is a spring of excellent fresh water, noticed in my report, published by the Board in 1794. From chapter one to four, twenty pages are filled

with descriptions of particular seats—Major Cartwright's farm-house, Mr. Hoyte's *drawing-room*, whipping a parson in a pulpit, Sir Joseph Banks's desk, beside a variety of common-place remarks, the tendency of which is to prove, what every one knows, that some people are very ridiculous, that Sir Joseph is very methodical, and that materials for building are cheaper in some parts of Lincolnshire than in many other counties.

CHAP. IV.

SECT. I.—SIZE OF FARMS.

THE particular instances of the size of farms, recorded by Mr. Young, being only a small portion of the county of Lincoln, are not sufficient data from which conclusions may properly be formed of the whole; and whoever takes up his book, and compares it with the map of the county, will be convinced in a moment of the truth of this asser-

tion. I cannot help noticing the particular mention of West Keal, where sixty tenants pay 1350l. I valued and let that estate, upon *leases*, a few years since, and can assure the public that it is rented sufficiently high.

Mr. Young does not pretend to have viewed it ; but his mode of giving opinions of the value of land exceeds the folly of all ‘land-tasting,’ and sets it at defiance:—‘It is said to be worth much more.’ This is a very *liberal* way of settling the opinions of landlord and tenant, ‘*preventing clamour, and rendering their situations smooth and quiet.*’

In the manor of Reevesby there are sixty-two farms for the rental of 1357l. being 3401 acres. With great deference to the humanity of the Right Hon. Baronet,* I cannot help here observing, though not with the *candour* of Mr. Arthur Young, that the cause of this lordship remaining in the hands of so many occupiers, and being so indiffer-

* Sir Joseph Banks.

ently cultivated, is, that it has continued, from time to time, subservient to and dependent upon the occupation of the adjoining great commons, the East and West Fens, instead of the common rights being considered, as they ought to have been, merely appendages to the land to be occupied or not, as the seasons should allow. I have some ground for this opinion, because, about ten years ago, I let several farms in this parish, belonging to General Manners, which are adjoining the commons, to the old tenants, and I recollect that the arguments they then used against the advanced rent which I had fixed, were as follow :

1st. That Sir Joseph Banks's tenants did not pay more than half as much rent.

2d. That the commons were so extremely perilous for cattle, sheep, and geese, that they generally lost, by death, one-third of their stock annually, and even in some particular seasons the whole.

My answers to the above arguments were,
'Sir Joseph Banks's management is not to be—

a rule for my conduct. Prove to me that either Sir Joseph's tenants or you have made the best use of the occupations in Reevesby ; and I will charge you with less rent.

‘ I have not put any value on the rights of common ; and so far from thinking they have produced any benefit to you, I am convinced, from your own accounts agreeing with my observations, that in your mode of occupying them they have produced a positive loss ; therefore if you can let the rights of the common for any thing, take it ;—it will be clear gain to you.

‘ Attend to the due occupation of your ancient inclosures, throw away your visionary prospects of gain ; and you will run no risque. Your industry will produce a certainty of bread, and something to lay up for the winter of life.’ Probably it was found that Sir Joseph Banks's tenants, who did not pay more than half as much rent as the farmers before-mentioned, for the same natural quality and extent of soil, were poorer than they.

The rapidity with which the cultivation

of turnips has spread, and the manner in which they are cultivated,' and 'the immense drainages, will be subjects of discussion under their particular heads.'

'The general rise of rent in this county.' Mr. Young, in writing upon this last subject, makes no allowance for the gradual decrease in the value of money for fifty years past, and the increased price of provisions. When these circumstances shall be properly estimated, the landed interest will not be found to have gained a shilling of advanced rent, as arising from the improved fertility of the soil, and the superior uses to which it has been applied.

SECT. II.—RENT.

If it were necessary to ascertain the rentals of all the estates in Lincolnshire, as data for any important calculation of the Board; it must appear, even to a common observer, upon a cursory view of Mr. Young's report, that he has fallen far short of obtaining that end.

‘ Long Sutton Common, lately inclosed, from 30 to 50 shillings per acre rent.’ The land in Wyberton, ‘ 17 acres sold for 1200 guineas.’ This would rather prove that the purchaser intended to regain most of the purchase-money back, by *paring, burning,* and *cropping* it with corn successively afterwards, or that the contiguity of this land to some other property had induced the purchaser to give an extraordinary price for it. The same may be said of Mr. Sanderson’s sale. It has been the misfortune of all Mr. Young’s writings, that he has ever imitated his friend, *the Baron*, in searching rather for the marvellous than the true !

‘ The extraordinary instance mentioned of the purchase of Ewerby, with a view to prove how little the value of land was known some years ago in this county,’ admits of some explanation which he has forced me to bring forward, in order to shew that he was egregiously duped ; as he will appear to have been in many instances of a like nature. See how a plain matter of fact shall put him down !

A few years ago the proprietor of Ewerby being desirous of selling it, sent down a 'land-taster,' as Mr. Young is pleased to call men who profess to understand the value of land, from his own neighbourhood, I believe the county of Essex. Of this, notice was given to the tenant, previously to the surveyor's arrival, and the intention of the landlord was not withheld from him. This gentleman was not well acquainted with the district, as will hereafter be shewn. Mr. T. with his usual activity, shewed the surveyor the estate, and with the usual *candour* of a *good tenant*, explained to him the *wetness* of the land, the *smallness* of the *general produce*, and the *perils* and *dangers* to which the occupier of such *low land estate* was at all times *liable* from *breaches of banks*,* &c. &c. These reports were corroborated by the then *appearance of the estate*:

* The lower part of it is defended partly by an embankment, which affords the tenant an opportunity of letting in water for his cattle in dry summers through a small sluice, by means of which Mr. T. can let it in, for that or *any other* purpose.

for at that time it was *unusually* wet, the lower part of it being *covered with water*, and to all *appearance drowned*!

The surveyor returned to his employer, with his report extremely unfavourable to the immediate sale of the estate; and so far from his supposing it would bear any advance of rent, he was of opinion that the proprietor must think himself very fortunate if he could obtain the then rent of the estate for a permanency, by persuading the tenant, who was a responsible man, to take a long lease of it. This proprietor was influenced in this manner; and Mr. T. was sent for; who, after *many objections and hesitations*, was *prevailed upon*, by way of *obliging his landlord*, to accept a lease of the 1300 acres, at the *old rent*, for 21 years, which being thus *so well ascertained*, the estate was offered to sale; and who but the man who had a 21 year's lease should bid for it? He bought it for 13l. per acre. But if it had been then offered for sale, unincumbered with this lease, to persons who knew its *actual condition*, the whole

would have then fetched at least 26l. per acre. The extraordinary account of 75 acres of land in Ancaster valley, stated to be sold for 7000l. might have been easily explained by any intelligent observer of it and of the adjoining property :—but I had forgot myself ; it is told as a marvellous account, and any further explanation of it would destroy the effect.

‘ Land about Blankney, &c. sells at thirty years purchase ; some has been sold at fifty.’

‘ Dr. Ellis’s father let a farm for 13l. a year, which is now 100l.’

If these accounts prove any thing, it is that some lands, which have been sold, were let for near the yearly value, and some for scarcely half ; because, when the ‘ time’s price,’ as it is called, is ascertained either by a fair letting or valuation of estates ; the number of years’ purchase are nearly the same in all country situations, and are generally regulated by the value of money ; and when a variation takes place in the number of years’ purchase, some other consi-

deration must be included, upon which a yearly value cannot properly be charged, *i. e.* Borough interest, vicinity to the metropolis or large towns, &c.

West Keal again was let by me, three or four years ago, for 1330*l.* per annum, the then fair value, upon agreements equal to leases, for the preservation and improvement of the estate ; though Mr. Young has not observed this circumstance ; and he presumes to say the estate is *worth more rent*. Here he takes up the office of ‘ a land-taster ’ with a vengeance ; and, in order to have made up his mind accurately, ought to have taken the covenants, by which the tenants hold, into his mature consideration.

Winteringham may be summed up in very few words as to the inducement for breaking part of it up, and converting it to tillage—the prospect of immediate gain. I recollect hearing a Yorkshire land-taster, who has known the spot for a great length of time, observe, ‘ Lord Carrington is killing the goose for the golden egg, at Winteringham.’

Mr. Land-taster Young values this estate at upwards of *five shillings* per acre more than its present letting. Upon the whole, after attentively pursuing Mr. Young's statements of the rents of estates in partial instances, not comprising collectively one-twentieth part of the county, picked up from vague reports at market ordinaries, in morning rides, &c. and in many of those instances where in one and the same parish the rents vary from ten to thirty, and from thirty to fifty shillings per acre, without any specific quantities being stated in a single instance ; it is impossible for an average rent to be drawn or fixed on any description of soil, for any purpose of calculation. Let me instance the case of Reevesby, where one proprietor lets his land for eight or nine shillings per acre, and another lets his, of the same quality, for fourteen or fifteen shillings. Proprietors of land are actuated by so many different motives in letting their estates ; and the occupiers differ so much in their management ; that the rent actually paid by the re-

spective occupiers, (could it be ascertained) in the several parishes and hamlets, would not of itself afford any data to ground a calculation of the smallest importance upon. It is not in any degree relied upon in making a parochial rate; as gentlemen in the Commission of the Peace may be well aware: and most probably the reason I have assigned in a great degree operated as an inducement to lay that consideration aside.

The calculation upon the product of land at Humberstone perfectly agrees with my observation upon Sect. 1. The information received tended to bring out, in the result, forty shillings and threepence for three years rent and the farmer's income upon an acre of land: this mode of calculation gives only four shillings and three pence for the landlord's three years rent. But finding that the rent of the land ought to be about sixteen shillings per acre per annum, Mr. Young returns upon his calculation, and increases the product and price of his crop, and the *result*

is exactly what he desired. And if this mode had not answered the desired purpose, he had nothing more to do than to reduce the expences of seed and cultivation, and the result would have been agreeable to his wishes. It may not be irrelevant here to remark, that although in the second calculation the price of the crop of wheat per quarter is raised to forty-four shillings, the price of seed stands at forty, as in the first. So much for calculations.

SECT. III.—TYTHES.

UPON my first perusal of this section, I apprehended Mr. Young was about to propose or recommend some mode for the commutation of tythes, upon a hint from the proceedings of one of the western counties; but it appears that he has thought proper to broach and agitate the question, without either coming to any decision or giving any opinion upon the subject. A ‘general desire’ may prevail among interested persons, who can see only one side of the question, that is, their own, ‘that a law should pass

for the commutation of tythes.' What law could pass in this country for the commutation of tythes which did not secure to the owners of that species of property a perfect equivalent in land or corn rents for it? If a law were to pass short of this effect, the tythe owners would have only one consolation left, though a melancholy one, that the example and progress of those means which tend to shake the security of their property would soon render all other property equally insecure. Mr. Young's remarks savour too much of his *old doctrine*, and are better suited to the French than to the English code.

The commutations for tythes have been chiefly made by way of bargain in the Smithfield way, with this difference, that neither party understood exactly what they were about; and as Mr. Young has produced a statement made by the intelligent Mr. Parkinson, a gentleman for whom I have no small share of respect, and has adopted it as a rule to act upon, I shall beg leave to make a few

observations, merely to shew that it is liable to some corrections.

The impropiator of a tract of ordinary common-field land, which requires fallowing, folding, manuring, and a considerable personal property to be laid out upon it, in order to force crops of grain, and which upon an inclosure could not be laid down profitably for pasture, is justifiable in demanding a *much larger portion* of such land as a commutation for tythes, than of land of a superior quality, which, if inclosed and left tythable, might be profitably cultivated, without extraordinary labour and expence, or laid down for pasture.

This holds good particularly in cases where there is a lay impropiator and a vicar in the same parish, where, upon an inclosure without commutation, the corn tythes may be changed into those of agistment. A vicar of a parish, now chiefly consisting of arable land capable of being improved into good meadow and pasture, might justifiably demand a larger portion of such land as a com-

mutation for tythes, than if it was of an ordinary quality ; because, if the proprietors inclose without commuting the tythes, such land will carry the greatest quantity of stock, and the most valuable lambs and wool, and agistment will be the result : whilst ordinary land must either be continued arable, or, if laid down for pasture, will bear but little or no improvement, and in that state will only carry a less quantity of stock, and that of an inferior sort. The fair way of considering this subject, is to look to the present quality and condition of the land, and to estimate the probable state of it when it shall be inclosed, according to the uses for which it will be best adapted, and then will be seen the bearings of the different interests, and a clear estimate may be made of the proportion which should be given for the commutation.*

* After a determination that the inclosure of any parish or district will be beneficial to the landed interest, and it shall be made to appear, from the quality of the soil to be inclosed, and the best mode of cultivating it when inclosed,

The result of such considerations will probably be the reverse of Mr. Young's statement of the proportions to be given of different sorts of land as a commutation for the tythes.

Haxey is one of the four parishes of the Isle of Axholm, and particularly noticed as having the tythes gathered.

I am fearful I shall be suspected of changing sides with Mr. Young; but being a Commissioner for the drainage and inclosure of the commons in that isle, I have been a considerable time upon the spot, and have heard and seen a good deal of the concerns of the district; and I understood from Mr. Mitton, the agent for the lessee of the tythes of Haxey, under the Archbishop of York, that he compounded with the most considerable of the farmers at Haxey for their corn tythes, as well common field as inclosed, at one pound four shillings per acre.

(without commutation of tythes) that by such measure the rector's or vicar's interest will be depressed, the less is offered as a commutation, and *vice versa*. There can be no general rule, so much depends upon local circumstances.

The Reverend Mr. Lamb, vicar of Haxey, informed me that his vicarial tythes are very productive; that he takes as high as four pound four shillings per acre for the tythe of some vegetable crops in the common fields. He particularly mentioned onions, of which, at the time Mr. Young visited Haxey, the tythes were worth five pound five shillings per acre. The terms of annual commutations depend so much upon the supineness or the ignorance of one party and the address of the other, that they are not generally a criterion of the value of them, any more than of the land from which they are payable.

But a regard to truth obliges me to acknowledge, that for one farmer who is overreached in a negociation of this sort, there will be found twenty parsons.

‘ Woods exempted from tythes, because from a very ancient custom, all stand from twenty to twenty-three years growth ’

It is a thousand pities that Mr. Young has committed the honest faithful steward,

Parkinson, so often, upon subjects on which he ought to have exercised his own judgment; and who doubts but that he possesses at least enough to correct the exuberance of Mr. Parkinson's zeal, to assist him in his report?

The mere *custom* alluded to cannot of itself be the sole cause for suffering the underwoods to remain from twenty to twenty-three years uncut and unappropriated; because, however such mode of occupation might be at first desirable, of which I have great doubt, in a series of years its application and the markets for it would vary, of which an intelligent faithful steward ought to have availed himself: beside, it is fair in calculation to suppose, that without some weighty consideration* to induce the proprietors to refrain from cutting it till it shall be upwards of twenty years growth, they would have

* If underwood stands to be twenty years' growth before it is severed, it is discharged from a payment of tithes by law.

attempted the cultivation of a species of underwood, which would have come earlier to perfection, and thereby admitted of a quicker return, probably at fourteen or fifteen years' growth. With this consideration, a *quicker return might have amply compensated for the payment of tythes.*

I have enlarged upon this subject, merely to shew that Mr. Young has passed over a *pretended ancient custom* without a competent enquiry, which, probably, had want of judgment for its foundation, and prejudice for its support.

SECT. IV.—POOR RATES.

MR. YOUNG has enumerated very few instances in order to form an average amount of poor rates, and does not profess any kind of accuracy upon the subject; but rather leaves the enquiry for a future job, and, probably, a further subject of taxation. I have but little to observe in this place, except that the 2s. in the pound on the 'real rent,' all

over the county, seems to be the average he has thought proper to fix.

Whether two shillings or not, there is every reason to conclude, that if the inhabitants were to be careful in properly apprenticing out the infant poor as soon as they are capable of becoming useful, and to take care that the idle and dissolute of riper years, who are capable of working, should be compelled to it, as a contribution towards the support of the aged and infirm, who might even themselves be useful in some mode of manufacture, or preparation of the raw materials, the poor rates would be considerably less.

SECT. V.—LEASES.

PART of the lordship of Pointon was let by me, five or six years since, upon leases for twenty-one years, under ‘covenants of improvement.’ Mr. Kent, a ‘land-taster’ of great eminence, having been required to give an opinion upon the value of this estate, wrote a letter to the proprietor, of which I

am in possession, so replete with flattering encomiums on the benefit to be derived from the system of management and regulations laid down to be enforced by the leases, that I should equal Mr. Young in vanity were I to introduce it here.

The improvements alluded to were not ‘suggested by the tenantry,’ but by myself. I observed that some of the pasture land wore a much worse appearance, and was of much less immediate value, than other parts; and the soil, upon examination, appeared to be equally good. Upon a full investigation, I ascertained that such land, to use the language of the country, had been ‘ploughed out,’ which, in other words, is the having been broken up and cropped by some former tenant, as long as it would bear any thing, and then (miserable resource!) left to repair itself by *rest*.*

* Can Mr. Young have been at Folkingham to inspect the agriculture of that part of the county, and not gain information of the fact, that it is a common practice, upon some of the most considerable estates in that neighbourhood, to permit a favourite tenant, and so forth, to plough up parcels

Land of this description I allowed to be ploughed under due restrictions to enforce good fallowing and manuring; and, after the first crop of grain, to be again laid down for permanent pasture. The improvement has not been wholly made ‘by means of drainage,’ although draining, where necessary, was one of the improvements pointed out in a general system of good management.

Mr. Young has succeeded in his enquiries about leases like all other men who endeavour to prove a negative. Had his enquiries been directed to prove in what particular instances leases had been granted in Lincolnshire, with a view to the improvement of its agriculture, and the benefit of the respective proprietors and tenants, he would have found the estate of the Crown, in the Isle of Axholm, leased to Lord Carteret, and properly again leased by him to subtenants:—the

of pasture land, and to keep them under the plough five or six years, and upon laying such land down unconditionally to plough more, and so in routine, till the whole become nearly a *caput mortuum*?

estate of General Manners—the manor of Bloxholme, &c. near Sleaford and Rigsby ; and Tothby, near Alford ; Salmonby, near Horncastle ; Tealby, near Market-Raisen ; Hogsthorpe, Mumby, and Orby, in the Middle and North Marshes, and in several other parishes ; comprising one of the most respectable estates in the county of Lincoln :—also the estate of Nevile King, Esquire, comprising the lordships of Ashby and of Martin, near Sleaford :—the manors of Hackthorne, Hanworth, &c. near Lincoln ; Fona-by, near Wragby ; West Keal, near Spilsby ; and estates in several other parishes, the property of John Cracroft, Esquire :—in Candlesby Welton, and in several other parishes, near Spilsby, the property of Thomas Masingberd, Esq. All the foregoing estates, with many others, have been let by me within the last ten years, for different terms, from seven to twenty-one years, according to circumstances. And I have no doubt that they will improve equal to the most sanguine expectations, if the agents are attentive to the

due observance of the rules and regulations which have been laid down.

Mr. Young states in his tour, that he has been in or very near several of the above recited places, without *giving* any information upon this subject:—for what reason he may best explain.

I have not, in any instance, raised the rent of land considerably, without the most material condition being a lease for a term of years, as a security that during its existence the tenant shall remain in the unmolested and undisturbed enjoyment of the result of his extraordinary expences, labour, and exertions, in either restoring or increasing the powers of the land; and without, at the same time, taking care that the lessor shall enter upon his estate at the end of the term in an improved condition.

Mr. Young's recommendation to landlords 'not to lease the several farms of an estate at one time,' is supported by a very flimsy argument, if it can be called an argument; but it is rather an unsupported assertion. He

observes, ‘ if the terms of the leases are so arranged that a few will fall in every year, for five or six years, there will be no general operations of tasting and valuing ;’ ‘ there will be no outcry ;’ ‘ the business will be regular, and the effect smooth and quiet.’

A much better *theoretical* argument might have been found for this recommendation, which is, that by these means a proprietor would not have all his tenants to bargain with at one and the same time ; who, in that case, might enter into combinations to work upon his feelings and his pocket. But this flimsy argument has no weight in *practice*, because, when the landlord means to act towards his tenants in a fair and honourable manner, and employs a proper agent, the parties soon come to the point of business, and an amicable conclusion. In such cases, ‘ clamour and outcry’ are totally out of the question ; but Mr. Young, who professes upon most occasions to be the organ of Suffolk and Norfolk husbandry, knows, or ought to know, that the farmers in those

counties do not wait till the expiration of their leases before they make terms with their landlords for new ones. They generally come to an understanding upon this head soon after they enter upon the last rotation of cropping in the term of years ; for the evident reason, that probably fortuitous circumstances, as well as the view of certain advantages discovered by experience, may have either induced them to vary the line of cultivation, or wish to do it ; or they may be desirous to be looking out for a new situation in time, and to have it determined whether, in their last course of cropping, they are to farm exactly in conformity with the covenants of their leases or not. However, the practice is as I have stated it to be, and a variety of reasons might be further pointed out why it is both desirable and good.

The following extracts on this subject are taken from my Report of Lincolnshire.*

* Pages 28, 98, 99, 100, 101.

‘ It might be said, by a cursory observer, that it is not probable that an occupier should delay his own interest, by pursuing that mode of agriculture which is ultimately destructive of it, therefore leases are unnecessary; but when it is considered how many indirect motives may draw a farmer from pursuing a line directed towards a permanent interest in the soil, it will no longer remain a matter of surprize: for instance; a proprietor may have shewn a degree of instability in his conduct towards his tenantry, by raising their rents, already sufficiently high, according to the state of the land, without granting leases, or pointing out any modes of improvement or management, by which the tenantry may be compensated for such additional rent. A proprietor may have discovered some symptoms of extravagance, and a portentous apprehension may be a-float, that alienation of the property may take place; and, last of all, the tenant’s own circumstances may, from various causes, (and amongst the foremost

may be found a perseverance in a mode of agriculture, tending to keep him poor, and the land weak and foul) induce him necessarily to prefer immediate gain to future prospects.'

'The gentleman of landed property, who should make a resolution not to grant any part of his estate upon a lease, would commit as great an error, as he who grants the whole in that way. There are but few estates that are so circumstanced as not to admit of improvement; few on which an occupier of abilities might not lay out a considerable part of his property, for the sake of future advantages to his landlord as well as himself. On this account it is reasonable that he should be secured in his expectations, as far as human foresight will allow; and this is most effectually done by a lease. Though a gentleman's word may be as binding to him as his bond, his successor is not bound by it; therefore a farmer cannot be expected to lay out his money, which is often

the dependence of a family of children, upon the uncertainty of an occupation from year to year. Such gentlemen as are determined not to grant leases at any rate, must be content to let their estates beneath their real value, and neglect many useful improvements, which would tend to their own, the tenant's, and the public advantage.

‘ Many gentlemen of this temper possess a pride in not raising their rents, and esteem all others poor who attempt to make a fair income of their possessions. The tenants upon such farms are not found to be richer than those on improved estates, for as they rent the land at half the real value, they are content to exert but half their industry, and consequently jog on in an antediluvian stile. There is no great danger of such estates being reduced in value by self-interested tenants, on which account leases are unnecessary for the landlord's sake, whilst their farms are considered as hereditary possessions, lineally descending from father to son. The trouble or difficulty of agency, under

such gentlemen, is comparatively small. A superannuated domestic may do their business as well as any other person. An advance of rent would give a spur to industry, by rousing the whole body of farmers into action.

‘ Where an estate is let according to its fair value, a lease is as necessary to secure a landlord’s interest in the premises as a tenant’s. Where a farmer occupies land from year to year, particularly arable land, if he is self-interested, indolent, or injudicious, a farm may almost imperceptibly become impoverished before any alarm is taken. Indeed such farms generally fall into the proprietor’s hands in the most wretched condition. I have frequently heard gentlemen of landed property complain, that they are considerable losers by farming ; and it may reasonably be accounted for, since the land usually comes into their hands in a reduced state, and in that case, let who will be occupier, two or three years rent must be sunk to restore it. *Rent is an annual sum paid by the tenant to the*

landlord, without diminishing the value of his property ; and when the value of an estate is reduced, it cannot be called rent, but so much deducted from the real worth of the possession.

Proprietors of land do not all of them consider this matter in a true light, and when they can advance the annual income of their estates, consider it as rent, whilst the property is suffering in an equal proportion to the annual sum received during the demise.

In the course of my experience, I have had applications from people to take farms consisting of arable and pasture, who have set out with a determination not to be bound by what I conceived to be the rules of good husbandry, but to do as they pleased with the premises during the intended demise ; I always refused to treat upon such terms, well knowing the value of the land must be reduced. But, when such matters have been represented to a principal, who was not a judge in these things, he considered such denial as foregoing his interest, by refusing what appeared to him to be a great rent.

‘ There are particular situations where long leases are unnecessary and improper, especially when farms consist wholly of rich pasture land, which will admit of no improvement, or farms lying near to gentlemen’s seats or parks, where a disagreeable neighbour, for a term of years, would be a great inconvenience. Where gentlemen forego their own interest, and that of the community, by not granting leases, by which it may possibly be imagined such tenants would become independent of their landlords, they are guilty of a gross error, because when leases are properly drawn, it must always be highly to a tenant’s prejudice to offend his landlord. Fortuitous circumstances ever produce some indulgence to be solicited from a landlord ; even exacting rent on the days it becomes payable, would be an inconveniency which many tenants could not bear. All farms should be let upon agreements, whether for one or twenty-one years, in a judicious manner, as near as possible for the mutual advantage of landlord and

tenant, always preserving the value of the land at least. Wherever agreements or leases are not made with such views, or directed to such ends, it would be better that no such leases or agreements subsisted. Though the value of the land would be likely to be diminished, yet abuses would not be so speciously practised as when they are admitted by stipulated terms, reciprocally established between the proprietor and his tenant.

‘ I cannot take leave of this subject without recommending to all gentlemen of landed property, as well as persons desirous of hiring farms, to be cautious that farmers do not take more land than their circumstances will admit of stocking, improving, and managing, to the greatest advantage. Though the ill consequences attending such practices, both to landlord and tenant, are flagrant, yet they are but too frequent; by which procedure, many very industrious farmers have been ruined, and many estates undeservedly brought into disrepute.’

SECT. VI.—EXPENCES AND PROFIT.

THE calculations recited under this head are upon a par with those under the head of 'Rent.' I dined at the farmers' ordinary at Louth a few weeks after Mr. Young had visited them there, and the recollection of the extraordinary stories they had induced him to record were subjects of great exultation and merriment.

Louth affords a safe, convenient, and short navigation to the sea, and if grain sells lower there than at Lincoln, it must follow that the place is deficient in a spirit of enterprize in trade.

The distance from Smithfield is no obstacle in the sale of fat cattle and sheep in the north marshes.

Wakefield, Leeds, and some other manufacturing towns in Yorkshire, afford as good, if not better markets, at all seasons, than Smithfield.

The Yorkshire agents come down into the country, visit the graziers at their homes, and there make their bargains for cattle and

sheep, which is an evident advantage on the part of the latter.

Cattle for salting and victualling of shipping might be slaughtered at Boston to great advantage.

In a county well supplied with rivers and canals, and bounded on the east by the German Ocean, it requires some further explanation than Mr. Young has given, to ascertain to what extent 'a heavy land-carriage' for the product of the soil is necessary.

The country about Alford seems to be the most likely spot. Before the war a scheme was in agitation for making a harbour on the coast nearest to that town, with a navigation to it, and whenever we shall have a peace, and money become once more plentiful, it will probably be effected.

I am of opinion that there is a great deal of bad land in Lincolnshire remaining under the plough which ought to be laid down for grass, as it is better adapted for that mode of occupation. It has not the essential requisites of either ripening the corn or producing

it of a good quality, but requires two summers to produce one crop. Of this description are those soils with the substratum of whitish, churlish, infertile clays, with a flattering, though thin staple of a light loamy and sandy nature.

Early sowing upon all land of a clayey and cold bottom, in Lincolnshire, will always turn to a very good account. Appearances, however they may flatter, very often prove deceitful in this county.

CHAP. V.

IMPLEMENTS.

MAJOR CARTWRIGHT'S plough is a good tool ; altho' upon a 'highly cultivated farm like his' what business he can have for a *twitch drag*, I am at a loss to conceive. But the Major is a very ingenious gentleman, and seems to possess every thing in the highest order ; and I dare say his beef and his port

were as good as his implements of husbandry. I cannot, however, help thinking that the half-fleke hurdles are as simple and cheap, and will answer the purpose of fencing the lambs against the ditches equal to his new invented hurdle 'A A.'

Such things may be conveyed by water from the woods to Boston, and require neither 'nuts nor rivets.'

The instances Mr. Young has detailed in this chapter do not prove that one-five hundredth part of the farmers in this county are much alive to improvements; those gentlemen he has mentioned are amateurs, and would have been so had they farmed upon the deserts of Arabia; their names are picked, and pointed out in different districts, many of them sixty miles distant from each other. Has Mr. Young in a single instance told us that the example of any one of those gentlemen has diffused a spirit for improvement in the parishes or districts contiguous to that in which they reside? No; they are by the common farmers considered

as men who, like Mr. Young, are book-learned, and, in their vulgar conceptions, are spending their money without any prospect of meeting with a return.

In consequence of the price of thrashing-machines having been by the first inventor fixed too high, almost every mechanical knave has been tempted to set up the trade of making them: there are swarms of them, therefore, not worth a shilling.

Mr. Raistrick, of Northumberland, and of No. 15. Charing-Cross, is decidedly the first mechanic in this line, as also for the making of Churns.

CHAP. VI.

INCLOSING.

HAVING been particularly concerned in obtaining the act for the inclosure of Long-Sutton Commons, and in the valuation of the estates of Mr. Scrope, the lord of the manor, and having made frequent visits there since

the inclosure, I have with no small mortification observed, that that very valuable tract, the late commons, is now 'ploughing out,' and that if the landlords do not possess sufficient judgment to restrain the plough in time, it will soon be reduced considerably in the annual value.

The doctrine, that inclosing generally tends to depopulate a country, is now so universally exploded, that there is hardly an old washerwoman in the country who would assert it.

The improvement upon Lincoln Heath, by means of inclosing, none can doubt; but when Mr. Young was in the neighbourhood of Mr. Chaplin, of Blankney, he might have seen parts of the heath which had been inclosed and quicked twenty years ago, and afterwards 'ploughed out,' and returned again to a rabbit warren.

Twelve thousand acres of the Isle of Axholme would be very greatly improved, provided the land could be drained; but I fear it will be impossible upon the present plan, as I shall endeavour hereafter to shew,

The doctrine, that dividing and inclosing mixed property tends to great improvement, is now so generally admitted that it needs no arguments in its defence. I am, nevertheless, extremely sorry to add an observation which may be considered by some very eminent Commissioners of the old school, as in some degree illiberal; it respects ‘contiguity.’ Very frequently a narrow outlet is allotted to the large proprietor from his farm-house and buildings (where all the dwelling-houses, &c. are in many situations jumbled together) of some hundreds of acres, wholly a narrow slip, by which means a considerable part of the farm is laid out two or three miles distant from his home situation. The expence of occupying the land is thus very little diminished in consequence of the inclosure, the fencing comparatively much increased, and rendered extremely burthensome.

There are many Commissioners who continue this practice under an idea of the accumulated expence of all building materials;

but if they will give themselves time to calculate, on the other hand, the immense gain of laying the land out in squares, and thereby inducing the proprietors to erect farm buildings in the centre of the allotments, the saving, in point of labour, would be immense; and I am of opinion that in a square arable farm of four hundred acres, a farmer could afford to pay a much higher rent for having his residence in the centre, than if he was situated on one of the outer lines. If the land is duly valued, and consideration had to all the qualities and situations in a parish or district, the practice of giving each proprietor a detached parcel of each different quality of soil may very profitably be wholly done away, especially with respect to arable land, and remain only to be regarded in cases where meadow and rich pasture land, from some particular local circumstances, is extremely desirable for each proprietor.

CHAP. VII.

ARABLE LAND.

THE management of arable inclosed land may have been improved within thirty years; but at this time it is very rare to see an acre of it in a *perfect clean state*, equal to hundreds of acres you may see in almost every parish in Norfolk.

SECT I.—TILLAGE.

If the mode of ploughing arable common field land in the neighbourhood of Market-Deeping, by means of laying the ridges high, and the intermediate space of the furrows and wet sides of the lands down for grass, is such *admirable management*, Mr. Young might have seen the plan in a more perfect state on the fields of Long-Bennington, between Grantham and Newark.

But to pursue his arguments: if the wet sides of such lands as are seen from Chatteries towards Whitlesea, to Peterborough, produce

such miserable corn, such wet situation, in or near Deeping, cannot be much more favourable for good grass.

In the fourth volume of his Annals, p. 354, he sneers at an author who condemned such high and broad ridges upon strong land, who formed his opinion so because the sides of such lands next the furrows were generally wet, and the corn worthless, whereby the manure and seed laid thereon were thrown away, and so much land wasted.

There he was pleased to observe, that ‘such high and broad ridges are by far the best method of laying wet land dry; there is no necessity for water being in the furrows; that is the abuse of the mode.’ Now how does this idea agree with his opinion before me, where he admits that the sides of the lands where there are high ridges must necessarily be ‘wet, and produce miserable corn,’ and that they are best laid down with grass as an improvement?

If Mr. Timmel, of Bicker, had told a *practical farmer* that his servant had ploughed

five acres of land per day for nine days successively, he would have asked him how many furrows he carried to a yard in width? If it was four (as it ought to have been), it was an extraordinary performance; if two and a half, as was most probably the case, it was no great feat.

Mr. Young records how many times different farmers have ploughed their land for barley, but he does not vouchsafe to tell us what were these farmer's objects in ploughing often. If it was in order to draw out the roots of weeds, or to make the seeds of weeds vegetate, he who ploughed and harrowed his land oftenest, provided sufficient intervals between each ploughing, &c. were allowed, so as to produce the effect above mentioned, certainly approached nearest to the desired object. But when no such intention was meditated, once ploughing turnip-land for barley, provided the land works well, is generally sufficient.

SECT. II.—FALLOWING.

IF Mr. Young shall ever sufficiently influence the public opinion to banish fallowing as well as drilling, then the account of farming may be closed, and famine will probably be the result of his ingenuity.

As long as arable land has a tendency to bring forth its own natural productions, and it is the interest of man to substitute for these something of his own, means must be used to destroy the former, in order not only to give room for the latter, but to prevent the food which is prepared for it being unprofitably consumed. Without entering largely into this subject in this place, I shall presume to say, and can at any time prove, that it is impossible to pursue a profitable cultivation of land, and more especially light soils, without summer fallowing in many instances, as preparatory for turnips or a green vegetable crop, except where drilling and hoeing can be carried on to its greatest extent, which process Mr. Young affects to condemn as a general practice. And I think he exposed

his want of judgment as well as information on this subject at the Duke of Bedford's sheep-shearing in June, 1798, when he was completely answered, though not convinced, by Mr. Coke and Mr. Colhoun, of Norfolk.

SECT. III.—COURSE OF CROPPING.

THIS section is chiefly engrossed by chimerical observations and courses of cropping that the author picked up at market ordinaries, and gathered from informants, many of whom were perhaps little worthy of credit. He does not state that such courses of cropping are established as a rule of conduct between landlords and tenants, by written agreements or leases, or that he observed, on *examination* of the farms, that it was established by uniform practice; but, on the contrary, he tells us that Mr. Bourne, of Dalby, ‘when he finds the land in good heart, throws into his *excellent course* of husbandry a crop of *oats* after barley.’

To give the undisguised truth, it is the general practice of the farmers in the county of Lincoln, who are not under legal

restrictions, not to adhere to any particular course of husbandry ;* but whilst the land is ' in good heart,' that is, whilst it will produce a crop, they go on sowing such grain as will, in their apprehensions, bring home the most immediate gain, without looking to their future interest in the progressive improvement of their occupations. Probably this is occasioned by a want of permanency in the spot, and of course a want of confidence in the landlord, which, as Mr. Young justly allows, can only be inspired by granting leases. I observe the very respectable names Mr. Young has mentioned, and have no doubt they have each of them tried the courses of husbandry they have given him ; particularly Lord Brownlow, Mr. Chaplin, Mr. Harrison, Mr. Dalton, Mr. Graves, Major Cartwright, Mr. Goulton, Mr. Wilson, Mr. Thorold, Mr. Hoyte, Mr. Tindell, Mr. Lloyd, and others ; but if it was to be pointed out to these gentlemen, by competent autho-

* In Long-Sutton, Haxey, &c. I am perfect in the knowledge that there are no established courses of husbandry.

rity, that any other courses of husbandry would be more beneficial, they are not so thoroughly convinced of the exclusive excellence of their own management but that they would adopt them ; and it is not improbable that many of them have pursued the courses which are recited from authorities sometimes as little to be depended upon as Mr. Young's. That gentleman's cases would lead any disinterested observer to conjecture that they are rather *experimental* than established. He does not even assert, sanguine as he is, that such courses of husbandry as are set forth have been ascertained by long experience of the respective parties, and *that the ordinary farmers in their neighbourhoods are so well convinced they are right, that they find the profit of adopting them, and that they invariably pursue them.*

If any one of the amateurs in agriculture, mentioned under this section, were to travel into Norfolk, and inquire of any person, in any hundred or district of that county, as a considerable proprietor, land-steward, or farmer, what are the established courses of

husbandry adopted for the particular soils, he would be answered immediately, 'In nineteen instances in twenty, such and such,' or perhaps in a much larger proportion: there would be no hesitation, the facts would be found notorious. The inquirer (*if a practical husbandman*) might ride round the country and see that such are the facts. Why does Mr. Young's authority come forward in such questionable shape? Did he examine the courses of husbandry as stated? and if he had, and could prove the facts to be so in the particular instances he mentions, what would they amount to?—merely *that in certain instances, as one to twenty, or rather in a much greater disproportion, there were cases of regular practical courses of husbandry adopted and practised.*

To all this bye-standers may say, here is assertion for assertion, and nothing proved. True: but I make Mr. Young the offer of a wager; which shall be a payment to be made to three or more Norfolk or Suffolk farmers of skill and experience, for their

time and expences in putting these assertions to the proof, in an actual view and examination of this county, and a report upon this point. And also in ascertaining whether there are twenty thousand acres of what they shall deem and declare to be *clean arable land in the whole county of Lincoln*, except upon those estates upon which leases have been granted under my regulations.

I cannot close my comments upon this section without remarking, that the authorities Mr. Young has stated will not induce practical farmers to believe that a crop of barley, with a following crop of clover in the intermediate time before a crop of wheat, is more injurious to it than, if instead of barley the land had borne oats. Mr. Stephenson is not an old inhabitant of Holland Fen, he has chiefly practised farming in the *Middle Marsh*, the husbandry of which Mr. Young so much commends. His farm in Holland Fen, if I am rightly informed, is held upon an old lease, granted to his predecessor by Mr. Wyles, of Sussex. Probably it might

have thrown some light upon this subject if Mr. Young had examined the conditions of that lease, with respect to the cultivation of the farm. It might then have been discovered that a rule of management was laid down which, though not sanctioned by long experience on that particular spot, yet probably was pointed out and admitted by some man of inquiry, experience, and judgment in the country.

This may be plainly understood, that he who sows wheat upon either a barley or oat stubble, even in the fertile Holland Fen, ought not to promise himself either permanent benefit, or the thanks of an intelligent steward or landlord.

At Saltfleet, where Mr. Young observes that some of the land is inexhaustible by ploughing, a tenant of Mr. Cracroft, of Hackthorne, * had permission to plough part of

* I believe this was the same tenant of whom Mr. Young relates the comical story, that his landlord interrogated him, with much dread, every time he called to pay his rent or respects to him, ' If he was come to ask to have his rent bated?'

a field, being rich marsh land, according to the custom of the country: he so completely 'ploughed it out' that it would no longer bear any grain; it was of course left to repair itself by *rest*. And when I saw it three or four years ago, it was not worth so much rent as the other part of the field which remained in pasture, by twenty shillings per acre; and the only possible mode of bringing it about was to insist upon the tenant's breaking it up again, fallowing and manuring it for cole seeds, and then laying it down again with grass seeds.

SECT. IV.—CROPS COMMONLY CULTIVATED.

As the subjects in this section are supported in like manner as the last, I shall pass them over with observing upon the head of seeds,

That the land laid down by Mr. Chaplin with 'white clover, rib-grass, and hay seeds,' 'meaning to leave it while it was good,' did not strictly belong to the appellation of ar-

tificial grasses, which Mr. Young has given to them.

If Mr. Chaplin had meant to lay his land down permanently, what seeds could he have chosen which would have better answered his purpose at Blankney?

TURNIPS.

NOTWITHSTANDING the instances of good management in the culture of this crop set forth by Mr. Young, I have traversed the county of Lincoln at various times and seasons, much oftener than he can possibly have done, and I have not seen, in any one year, five hundred acres tolerably well hoed, nor that quantity of land properly prepared for producing a crop of turnips. ‘Three pounds of seed per acre;’—what a quantity! three-fourths of a pound of good seed, properly distributed, would be quite sufficient.

In order to be clearly understood, I beg leave here to observe, that my conclusions

are formed upon the best modes pursued by the generality of practical farmers in the counties of Norfolk and Suffolk ; and in order to support my assertions, I will enter the lists with Mr. Young upon the plan before proposed, in a view of the county and its management, by Norfolk or Suffolk farmers.

DRILLING.

MR. YOUNG'S opinions are unfavourable to this husbandry, and he is well known to condemn it both in public and private. At the Duke of Bedford's sheep-shearing, in 1798, he declared that drilling was deservedly on the decline, and that no one man in England had two thousand acres of drilled cropping. To which a Norfolk gentleman* replied, ' I have now two thousand acres of drilled corn, I am perfectly satisfied that it is beneficial to me, and I see no reason for discontinuing the practice.'

* T. W. Coke, Esq.

The few instances Mr. Young has mentioned of this husbandry being on the decline in the county of Lincoln, does not prove that the principal objects of drilling have been there perfectly known or understood. One gentleman thinks the process tedious; another says, 'it will not do here;' Lord Brownlow's father found it 'not so profitable as the common method;' Major Cartwright (Mr. Young's oracle) thinks the superiority of drilling is not so great with corn as with woad; 'Mr. Scoffin was absent;' Mr. Lexton 'found it would not answer, and gave it up;' Mr. Parkinson has drilled, 'had good barley;' Mr. Scrivenor, of Barton, drilled turnips, and some other persons did the same, and 'with very good success.'

Mr. Young himself seems to rest his opinions in his report, as he did in his conversation with the Norfolk gentlemen at Woburn, upon the single circumstance of corn being more productive when sown in the broad-cast than when drilled; but there are a variety of other points to be considered, if

that circumstance, in opposition to the experience of the majority of farmers who have adopted the drill in husbandry was to be allowed as decisive. Every advocate for drilling will admit that it is a mechanical process which requires not only some nicety in the management of the instrument, but also in the times and seasons for using it; in wet or showery weather it does not work well where the soil daubs or clogs, &c. &c. And many of Mr. Young's informants would have told him, had he been as much disposed to avail himself of the arguments in favour of the practice of drilling as against it, that the trouble of making the mules, in the shape of human beings whom they had to manage, adopt a new scheme, and to go cheerfully and properly on with it, was such that they tired of the experiment. Amongst innumerable considerations in favour of the drill husbandry, the following appear not the least worthy of observation, viz.

1. The great saving of all kinds of seed, and particularly in times of scarcity.

2. The necessary employment of the infant poor as hand-hoers of the rows of corn.

3. That by means of drilling, the process of horse-hoeing between the rows, in a considerable degree tends to cleanse the land of weeds, and render fallowing in succession less necessary.

4. That by means of drilling, the farmer can, in a decisive way, previously determine the exact quantity of seed which should be sown on each acre.

5. In drilling, green vegetable crops may be deposited between the rows, to be cultivated as a succeeding crop to beans and some kinds of grain.

6. By means of horse-hoeing, in the early stages of the growth of crops drilled, we cut or break the fibres of the roots of plants ; by which means they strike out a fresh : ‘ by horse-hoeing we mould up the plants, throw fresh earth upon the stems of them, and thereby produce fresh roots.’ All plants, from the configuration of their fibres, as far as they imbibe nourishment and support from

below, receive it at the ends or points, which are as so many mouths. Therefore, by increasing the number of fibres we so far increase the means of nourishment to the plant.

7. By means of drilling we can dispose the rows of the plants at such distances, and in such directions, as will best insure to them all an equal portion of sun, and a necessary quantity of air, for their health and prolific generation.

SECT. V.--CROPS NOT COMMONLY CULTIVATED.

DIBBLING.

THIS process is not much practised or understood in the county of Lincoln. It has been followed with great success in Norfolk these thirty years past, for peas, upon light soils broken up in the spring, after having been laid down with artificial grasses two years or upwards: also upon strong land for beans broken up from pasture or seeds, as well as for wheat upon clover root: and if practised here, would turn out equally beneficial.

ISLE OF AXHOLM.

OBSERVING a note in this section from the MS. of the Board upon this district, I take the liberty of observing that it is far from being correct. I am at this time a Commissioner for the inclosure of the commons ; as such it has been my duty to inspect the condition and value of all the land in the Isle ; and having twice valued and let a considerable estate there, I have some pretensions to know the condition of it.

There is no regular system of management whatever pursued without *compulsion*. I believe no leases have been granted, except upon Lord Carteret's estate by me. It is a general practice for the farmers to sow the land repeatedly with grain, flax, &c. &c. as long as it will bear a tolerable crop ; and when it becomes extremely foul, and will no longer bear driving or flogging, it is well dressed with manure. The best land is then sown with hemp, and the inferior with flax ; a luxuriant smothering crop of either pre-

vents the weeds from vegetating, and greatly checks or destroys them. The farmer then sets off a fresh to plough and sow grain successively. Indeed, whilst there is an appearance of a crop growing, the prospect of immediate profit tempts him forth to weed and protect it till housed, and then his care and solicitude cease. The returning season again awakens him to sow another crop.

Upon the whole, I never saw farmers more disposed than these to pursue their immediate prospects of gain, by excessive cropping of the land. The soil of the high land is, for the most part, excellent; but a clean acre of it is very uncommon.

WOAD.

WHEN I was upon my survey, I proceeded from Boston towards Brothertoft, in order to examine Major C.'s management; and upon the road overtook a very intelligent

man. I began my enquiries respecting the objects which presented themselves before us. The first was a number of small huts, with two or three larger buildings among them: ‘And what, my friend,’ said I, ‘is the occasion of that spot being so crowded with inhabitants?’ He replied—‘that is a moveable colony of woad people belonging to Mr. Harrison: he has taken a large quantity of ground, in order to cultivate woad.’ Upon my intimating that I had some knowledge of the subject, he proceeded—‘Mr. Harrison knows what he is about: he does not put himself to great expence in his buildings, that he may the better shift them from place to place, into the middle of his work, to save labour. These other large brick buildings are Major C.’s woad works, and cost some thousands of pounds.’ ‘They appear,’ said I, ‘to be put up in a very lasting manner; very substantial—how is that?’ ‘Yes, they are put up quite on the outside of his estate,’ replied the stranger: ‘some say for the sake of water carriage: but that’s all a joke, be-

cause the conveyance of his woad, when prepared, to Boston, is not one-hundredth part of the daily labour of bringing all the green woad to be manufactured at the mill. The Major outwitted himself strangely: he erected his buildings in Wyberton, that the maintenance of those who should become paupers in Brothertoft, by his trade, might remain wholly a burthen upon Wyberton: but he has, nevertheless, failed in his calculation: he is losing more by his increased labour, and the interest of the money expended on his buildings, than would maintain all his people.'

I took leave of my intelligent friend; passed through Brothertoft; and rode upon the commons of the East and West Fens.

The following extract is taken from a publication, entitled 'Public Characters of 1799-1800;' and as it gives a more descriptive account of what is going forward at Brothertoft than the most inquisitive surveyor or traveller could of himself discover

or collect, I have here introduced it literally from the biographer. I do not take upon me to say that it was written by the Major; but that it contains some expressions, which prove that the author was not unacquainted with military tactics, is very evident.

‘ In this year (1788) Major Cartwright, having previously sold his estate at Darlton, in the county of Nottingham, purchased an estate in Lincolnshire, of which the township and manor of Brothertoft is the principal part. Here he afterwards fixed his residence, improving the estate, cultivating it with judgment, in a high-spirited and expensive manner, and embellishing it with taste, but in a stile of simplicity adapted to the title he gave it of Brothertoft farm; and here divided his time between the plough and the pen:—he follows the occupation of a Cincinnatus and a Washington; and if he has not had the good fortune of those illustrious men, of serving his country in high military commands, he has at least shewn himself an

emulator of their virtues—by sacrificing his ambition at the shrine of his country, and boldly defending her dearest interests.

‘ The culture of our indigenous plant isatis, or woad, with the juice of which it is said the ancient Britons stained their bodies, and which is an article much used by modern dyers, is at Brothertoft conducted on a large scale.

‘ The woad is daily ground by means of a mill, requiring the power of eight horses ; and the room in which the grinding wheels act upon the plant, is about forty feet square, forming the centre only of a building nearly 200 feet long, and two stories high. *In front and rear* of the wings are erected lofty ranges, containing some thousand wooden grates, with galleries between them, on which the woad, after being ground and made into balls, is dried for preservation. On one side of this singular group, which at a distance resembles a great castle, and forming one front with the great building above-mentioned, is

another building containing tenements for thirty or more families of the woad-labourers, and the agents who superintend them; a school, and other conveniences; the whole together making a striking appearance, and adorning this level country. It refreshes the mind of the traveller by gratifying his eye with a pleasing picture, and his mind with ideas of the Earth's bounty, and of the benefits of human industry well directed. The establishment is an unique, bearing many marks of invention, and the works in general being on a construction much superior to any which are applied to the same purposes either in this or any other country.'

' About the time of the State trials in 1794, he began to write "The Common Wealth in Danger," which was published in 1795; besides a controversy of some length with the versatile author* of "The Example of France, a Warning to Britain." This

* Arthur Young.

work takes an instructive view of the state of the nation, and suggests important considerations respecting the means of repelling invasion.'

SAINTFOIN.

THIS grass is cultivated to a very great extent upon the estate of Sir William Manners, at Ponton, near Grantham, upon a mixed soil and a red creech, or scaly stone, and answers in an astonishing degree; but Mr. Young seems not to have heard of this place, nor of the proprietor.

Mr. Parkinson seems to have no respite from Mr. Young's severities: in page 168 he is made to say '*saintfoin makes land poor*: but on very barren heath or wold land he thinks it very useful; as it makes a soil produce a crop which naturally would only feed rabbits by *sbar grass*.' The inutility of this remark scarcely needs comment. A crop which makes 'land poor' is yet a desirable crop for the

poorest land where it flourishes ;* a doctrine flatly contradicted by the next informant, Mr. Parker, and by almost all the world.

PARSLEY.

MR. YOUNG mentions, that about Folkingham, ‘ amongst the good farmers, they have sown this plant.’ If he had made and reported his enquiries with candour and truth, he must have represented that this trial had not been made by the occupiers of one-hundredth part of the property about Folkingham. He has not mentioned the property of two proprietors ;† one of whom (Sir William Manners) had then a seat within three miles of Folkingham ; and probably possesses more landed property in that part of

* It appears that both Mr. Young and Mr. Parkinson were uninformed of the particular economy of this manured grass, which derives its radical support from below the superstratum of the soil. Here Mr. Young, with his usual perspicuity, has been playing with his friend, Mr. Parkinson, only upon the *surface* !

† Sir William Manners and Sir Gilbert Heathcote. The former possesses landed property in this county worth upwards of 20,000*l.* per annum.

Lincolnshire than is occupied by all the amateurs he has mentioned in his survey.

RICH GRAZING LAND.

MR. YOUNG, in his report upon this head, gives his readers an account of some instances of good land and good management, without mentioning those which are quite the reverse. He states about twenty parishes or districts ; and his instances, in many cases, extend only to a few acres in each. If I compute that not more than one-hundredth part* of the different descriptions of land in the county is brought under his *particular* consideration, I am confident that I shall not exceed the proportion. It will be required that I should, in the further progress of these subjects, point out how far the interests of the proprietors and of the community are impeded and injured in the remaining ninety-nine parts of one hundred which Mr. Young has glossed over or omitted.

* See the List, page 192.

As to courses of husbandry, there are none which the occupiers strictly attend to. The object is, to force repeated crops of grain, until the land *tires, and is exhausted*: and then to lay it down for grass; and though Mr. Young write ten thousand volumes in attempting to prove the contrary, he will not convince any intelligent practical husbandman of the truth of his assertions, who shall have had an opportunity of viewing the land in its present state of pasture and arable. The Yorkshire surveyor's remark, that Mr. Scrope, as well as Lord C. 'has killed the goose for the golden egg,' is here strictly applicable. A few years since, I valued Mr. Scrope's estate in Long Sutton; and at that time, a certain tract of land, called the Hall Marshes, which had, some years before, been in a state of excellent pasture, was totally 'ploughed out;' that is, reduced to a state of barrenness by repeated cropping, and then not worth 10s. per acre for the seven succeeding years; though in a state of grass it had been worth at least 30s.

Page 204. ‘No crop cleans land like hemp.’ Mr. Young ought to have added, that no crop *exhausts land* like hemp. Manure it well, and the crop will smother all other productions. But that crop, in coming to perfection, will feed upon and devour every particle of mucilage in the soil; and the produce will be proportionate to its previous store.

The following extract, relative to this subject, is taken from my Report, published by the Board in 1794.

‘The generality of the wolds of Lincolnshire might now be considered more valuable to the proprietors and occupiers, if the soil was in the precise *maiden state* in which the greatest part of it was found an hundred years ago, than it is possible to be made in the present reduced condition, for a very considerable length of time: the land having been broken up, or pared and burnt, and ploughed, without restriction, until it is quite exhausted.

‘ How little did those proprietors understand their own interests who permitted their tenants, without restraint, to break up, or pare and burn the turf of rabbit warrens, and other land, in a state of antient pasture, upon the delusive colour of an advance of rent, by which procedure the inheritance was injured in a tenfold ratio ; and who could be amused at last, under an idea that, if the tenants who had thus overploughed the land, stocked it again with rabbits, no damages were incurred ! Setting aside a *delay of the progress of agricultural improvements*, it must follow, that that soil, which is exhausted for one purpose, is equally exhausted for another. By this mode of plunder, and every kind of abuse in the occupancy of landed property, there are several men in this county who have acquired large fortunes.

‘ I cannot make a calculation upon the annual value of a rabbit warren (never having been concerned in the occupation of one) other than considering the land with a view

to cultivation ; and if the occupiers will not give more rent for it in that state than in any other, I should be inclined to destroy them ; rabbits being injurious to plantations, live fences, and to a well-cultivated neighbourhood.'

CHAP. IX.

GARDENS AND ORCHARDS.

THE proprietors and occupiers of land in Lincolnshire are not singular in the neglect of gardens and orchards. As objects of profit and advantage, they are there as well cultivated as in the improved counties of Norfolk and Suffolk: nevertheless they ought to be more attended to.

CHAP. X.

WOODS AND PLANTATIONS.

I SHALL beg leave to recur to my former opinion on this subject.

' The first thing which claims our at-

tention is a due inquiry whether land, which is now used for the production of timber, is most profitably applied to such purpose, under a due consideration of the nature of the soil, and its local situation and circumstances? The second, whether such timber is adapted to the soil upon which it is produced? I am of opinion, that all land of an high quality, viz. from eighteen shillings to twenty-five shillings per acre, might be the most profitably applied to the purposes of cultivation; the advantages to be derived from an annual rent, produced from corn, grass, &c. with its accumulating compound interest, will, in a term of years, necessary for bringing a crop of timber to perfection, produce a much larger sum than can be reckoned upon it.

‘ Various calculations have been made, upon the probable advantages to be derived from the cultivation of oak timber, but such calculations are wholly founded on conjecture, as the probable term of human existence falls so far short of that length of time which is

necessary to bring this tree to perfection, upon soil the best adapted for its production, that regular, periodical, and competent observations, in particular instances, are lost or hidden from our inquiries.

‘ It is difficult to set apart any spot of land, as best suited for the production of oak timber, which has not already produced it, because so much depends upon the substratum of soil through which the tap-root ought to find an easy progress, in regular approaches towards perfection: any inequalities, by means of stony or hard bodies, which it may meet with in any stage of its growth, will certainly retard the vigour of the tree, and make it become stunted, of which the superstratum of soil gives no indication, in the first instance, to govern us. Space is necessary to be allowed each tree, by regularly thinning of woods and plantations, in order that the expansion of the branches of them may not be too much impeded: a due proportion of branch and foliage being as necessary for their health

and support, as it is for the roots to remain unimpeded. Particular instances have occurred, where a large quantity of timber has been produced in high perfection, and where the trees have been very thick, with but little foliage ; but it has been in those situations where the soil is extremely deep and rich, making amends for the exclusion of a very considerable part of the atmospheric nutriment, which, on soils less fertile, is absolutely necessary to be imbibed by the plants for their health and support. If the oak has space for its branches to expand themselves, fifteen trees, containing on an average from eighty to one hundred feet of timber each, will cover an acre of ground. And unless, as in the case before stated, the trees have sufficient room for expansion of their branches, their growth will be impeded in proportion as they are cramped. Thin stapled clays of a low quality, such as are found in the west part of Huntingdonshire, and the high parts of Cambridgeshire, and now let from 5 to 7 shillings per acre, are probably well adapted

for the production of timber and underwood ; and upon the poorest cold soils of this county (though the quantity is small) timber and underwood should be continued where found, and improved on land where it is planted ; and similar soils should be converted into wood land.

‘ It is impossible that timber and underwood can be any where raised upon a given spot in a mixed state, in as large quantities, and to as much perfection, as they might be separately ; yet a very considerable head of timber may be raised, in succession, with a good crop of underwood ; and I consider this to be the most profitable mode of employing such land, by which means the present generation, as well as posterity, may be benefited ; and the land thus made much more productive than it would be by the separate cultivation of either timber or underwood, because the superstratum may be fully employed in raising the most valuable crop of underwood, being that for which the soil is adapted ; an advantage which may

probably be found applicable to the necessities of the country where it shall be produced, and of a much higher net annual product for rent than would be made of the land in any other mode of occupation; whilst the substratum is productive of a succession of timber of considerable value. I cannot close this remark without observing, that the general mode, in which gentlemen permit their woods to be managed, is not the best that can be devised. I recommend that forest officers, stewards, agents, and woodmen, shall have regular fixed salaries, and that they shall not constantly have it in their power to take advantage of their own wrongdoing; for, according to the present mode, pretty generally adopted in the felling and converting timber for sale, it is customary for them to take part of the property in bark, topwood, &c. &c. or poundage, as perquisites of office, upon the sale of it; and therefore, whilst the quantity annually to be cut is limited, it is their interest not to cut down such trees as are mature or decaying, but

otherwise the most thrifty ones, which would, according to the best mode of employing the land, pay most for standing longer, and which will consequently produce *most bark, and top or lop-wood*: and when gentlemen of landed property shall, from experience, feel the necessity of giving more attention than at present to the improvement of agriculture upon their estates, men of skill and experience will be employed to superintend them, at such salaries as will not only make them respectable, but will place them above the temptation of abusing the trusts to be reposed in them. I take the liberty of recommending to the Board of Agriculture, and to gentlemen of landed property in general, the measure of promoting the education of young men for the offices of surveyors and land-stewards, in the best cultivated counties, by sending them to assist in the best practical husbandry of Norfolk, Essex, Suffolk, and Hertfordshire; and the breeding, feeding, and improvement of cattle and sheep, now so suc-

cessfully practised in Leicestershire. And, that all persons who shall in future be disposed to practise as surveyors, should give their names to the Board of Agriculture, stating their pretensions, in order that they might undergo an examination, in a similar way as candidates for other professions; and upon being appointed, to receive certificates for their qualifications. If a plan, similar to this, were to be adopted, such men as had expended their time and property in acquiring the fundamental knowledge of agriculture, upon which subsequent experience had been grafted, would have a fair prospect of success from their exertions; and the interest of the community, as well as that of individuals, would be essentially promoted.'

Mr. Young is still at work with his friend Mr. Parkinson, and most assuredly brings him forward in a very *favourable* point of view! He has again mentioned Sir Joseph Banks's woods as a source of profit, and the management of them as an example to the county; but has thought proper to leave us

in the middle of the enquiry, for what reason he can best explain, yet certainly not for want of activity of mind, or from a dislike to much writing. He could turn 'land-taster' to value the lordship of West-Keal, which probably *he never examined*; but every thing at Reevesby, which he seems to have made one of his principal resting-places whilst he was making his report, he has taken from the mouth of Mr. Parkinson. The soil of Sir Joseph Banks's eight hundred and five acres of wood land, if cleared of timber and underwood, and even made tithable, would let, on an average, for sixteen shillings per acre; at least it is not so poor a soil as Mr. Young represents it.

That gentleman has not ascertained the precise number of years these woods have been planted. But for the sake of an easy calculation we will suppose, that for one hundred and twenty years past they have been in a profitable state, and that from that period they have been considered as a source of annual revenue.

It is but reasonable to conclude, that, previous to the data, viz. one hundred and twenty years back, when the calculation upon the supposed yearly profit commenced, there was a delay of the interest of the then proprietor whilst the woods were in their infant state previous to that period, equal to at least twenty-five years purchase of the then whole annual value of the soil of eight hundred and five acres, being four hundred and two pounds ten shillings per annum, with an accumulation of compound interest for the said one hundred and twenty years, in consideration for the delay of an annual rent of ten shillings per acre. Now this, with compound interest at four per cent. to the present time, amounts to an enormous sum beyond the value of the present stock.

It does not seem that it was at any time an object in the management of these woods to pursue the most profitable course; which I conceive would have been, to cultivate a proper crop of underwood; which might probably have been made to produce a larger

annual rent than the land would have done in either arable or pasture, with a regular head of timber, worth at least one hundred pounds per acre. *

* The Duke of Devonshire's five hundred acres of wood land near Alconbury-Hill, Hunts, though not worth ten shillings per acre per annum for any other purpose, produce in underwood a clear annual crop of twenty-five shillings per acre, with a very handsome head of timber. Such woods are profitable indeed!

Lord Gwydir's extensive woods in the eastern part of this county, under the judicious management of Messrs. Cluttons, of Cuckfield, in Sussex, are amongst the most improving. These gentlemen perfectly understand the mode of rendering wood land the most productive. Probably the great experience in Sussex and Kent has contributed in a considerable degree to this end. I have here seen many millions of young ashes, and other kinds of plants best adapted for underwood, according to the soil and situations, pricked into the young springs, as soon as the crop of underwood has been cut; the roots of such underwood as was considered unproductive and worthless having been first rooted out. This management deserved the attention of a 'great agriculturist,' and ought to have been recommended by him to those noblemen and stewards whom he mentions in this chapter, whose woods appear not to be very productive.

CHAP. XI.

WASTES.

IN the present instance, as will appear in many others, Mr. Young has adopted my remarks, as published by the Board in 1794, from which see the following extracts :

‘ The principal commons are the East and West Fens, and Wildmore Fen.

‘ These commons are situated a few miles north of Boston, within the manorial perambulation of the Soke of Bolingbroke, held under a lease from the Duchy of Lancaster, by Sir Joseph Banks, Bart. and contain together upwards of forty thousand acres, viz. West Fen, sixteen thousand nine hundred and twenty-four acres, two roods, six perches ; East Fen, twelve thousand four hundred and twenty-six acres, thirty-nine perches ; and Wildmore Fen, ten thousand six hundred and sixty-one acres, two roods, twenty-five perches. The number of towns within the

Soke, having right of common in the West Fen, are twenty-two; with falkage, turbary, fishing, and fowling. Eight towns of East Holland, having similar rights with the Soke commoners of the West Fen, claim a right of pasturage only upon the East Fen; which is accounted by the Soke commoners an intrusion, and will probably procrastinate the time of a division. Seventeen towns exercise a right of common on Wildmore Fen, besides those towns which exercise a right of common on the other fens; so that it appears that forty-seven towns claim a right of common on these fens.

These commons are under better regulations than any others in the fen country; which is probably owing to the directions of the respectable Baronet, a considerable part of whose estate is situated near to them: yet they are extremely wet and unprofitable in their present state, standing much in need of drainage, are generally overstocked, and dug up for turf and fuel. The cattle and

sheep depastured upon them are often very unhealthy, and of an inferior sort, occasioned by the scantiness, as well as the bad quality, of their food, and the wetness of their lair.

‘ Geese, with which these commons are generally stocked, (from various causes, of a nature similar to those which will be hereafter enumerated, with respect to Deeping Fens) are often subject to be destroyed.

‘ It is not a constant practice with the commoners to take all their cattle off the fens upon the approach of winter ; but some of the worst of the neat cattle, with the horses, and particularly those upon Wildmore Fen, are left to abide the event of the winter season ; and it seldom happens, that of the neat cattle many escape the effects of a severe winter. The horses are driven to such distress for food, that they eat up every remaining dead thistle, and are said to devour the hair off the manes and tails of each other, and also the dung of geese. A commoner, who farms his own estate in the vicinity of these commons, and pursues a hope of gain from

them in the fullest extent, is eventually not in a much better state than the rack-renter, in a series of years; for when two or three successive flattering winters present themselves, he goes on adding to the number of his stock of cattle and geese; then comes a fatal season, in which most of them, by various diseases occasioned by a sudden and continued wetness, are swept away.

‘The drainage of these commons is very practicable, and which would have been doubtless some time since effected, together with a general inclosure of them; but, there are some reasons which have conspired to prevent the measure being adopted, and which may gradually wear away under proper explanations.’

‘The drainage of these fens is not very difficult, and it will be attended with no greater expence than the land upon an inclosure can amply bear, without much inconvenience to the respective proprietors: but, as is the general case with all the low land which the sea has left, the lowest part

of these fens is nearest the high land, and the greatest distance from the outfall; and these commons cannot be properly drained without a catch-water drain under the high land, to take the soke and superfluous water, which would form a lodgement behind the commons, in a circuitous direction, to the outfall.

‘ I now proceed to mention those commons situated between the Welland and the Glenn, within the manors of East and West Deeping, which are held under a lease from the Crown by his Grace the Duke of Ancaster. Those commons are said to contain upwards of fifteen thousand acres; they stand very much in need of inclosing and draining, as the cattle and sheep depastured thereon are very unhealthy. The occupiers frequently, in one season, lose four-fifths of their stock. These commons are without stint, and almost every cottage within the manors has a common right belonging to it. Every kind of depredation is made upon this land, in cutting up the best of the turf

for fuel; and the farmers in the neighbourhood having common rights, availing themselves of a fine season, turn on seven or eight hundred sheep each, to ease their inclosed land, whilst the mere cottager cannot get a bite for a cow; but yet the cottager, in his turn, in a colourable way, takes the stock of a foreigner as his *own*, who occasionally turns on immense quantities of stock in good seasons. The cattle and sheep, which are constantly depastured on this common, are of a very unthrifty ill-shapen kind, from being frequently starved, and no attention paid to their breed. Geese are the only animals which are at any time thrifty; and these, frequently, when young, die of the cramp, or when plucked, in consequence of the excessive bleakness and wetness of the commons. A goose pays annually from one shilling to sixteen pence, by being four times plucked. These commons are the frequent resort of thieves, who convey the cattle into distant counties for sale.

‘Oak timber, holly, hazle, with the appear-

ance of leaves, nut-shells, and faggots of the tops of oak timber, set up in ridges, with the skeletons of deer and other animals, have frequently been found within three feet of the surface, by persons who have made it their employment, with iron spikes, to search into the soil for wood, which they afterwards dug out to considerable advantage.'

This gentleman observes, p. 224, that 'if there are any persons who profit by the occupancy of the commons, it is the people who keep geese;' and yet he states that Mr. Parkinson estimates the net profit of common right, p. 228, at twenty-six pounds six shillings. The first statement is nearest the truth. The fact will, upon investigation, appear to be, that a farmer in the vicinity of these commons, who makes most use of them, will be poorer than he who abandons them altogether.

It appears from Mr. Young's report, that the terms of the drainage and inclosure of the extensive commons of the East and West Fens are now under consideration. I hope

this improvement will not be procrastinated by the proposal of hard terms by any of the parties interested. Sir Joseph Banks's declarations are very liberal; and it is devoutly to be wished, that his example and representations to the Officers of the Duchy-Court of Lancaster may induce them to be equally liberal. The proprietors will most assuredly desire to be informed what particular rights the Crown has exercised upon these commons to entitle it to one-sixteenth * of the whole, amounting to two thousand five hundred acres and upwards of the average value of the land, before they agree to the drainage and inclosure upon such terms. If this point is left open, to be investigated with other claims, and determined by the Commissioners, all parties will be upon an equal footing.

It has been said, that the Officers of the

* Sir Joseph Banks is lessee from the Crown of the Soke of Bolingbroke, for lives or years, and consequently first entitled to this benefit.

Duchy-Court will set up a claim for 'broovage,' being the surplus herbage, after the commoners cattle shall be served. If this point be alike left open for the decision of the Commissioners, much will depend upon the extent of the exercise of such rights; but as it is presumed the commons never were stinted, it is improbable that there ever was a blade of grass to spare as 'broovage.'

A certain proportion of commons and waste lands is generally given to the lords of manors for rights of soil. Upon the inclosure of Long-Sutton commons, one-twentieth of them was allowed. If that proportion is to be merely a compensation for the lord's right of soil, a question might arise whether the lord's interest is worth any thing upon low, wet, flat land, where there is not even a probability of his deriving one shilling benefit from opening it in search of ore, coal, &c.

The interest of the community is best promoted by a due cultivation of so large a tract

of commons and waste lands, which ought not to be delayed by any high claims not strictly founded in equity. Whether one-sixteenth or one-hundred part go to the Crown as a compensation for the right of the soil, is an object of no comparative consideration.

It is generally understood that it is impossible for an inclosure bill to pass without the consent of the lord of the soil, however small and inconsiderable his interest as a proprietor may be. This is a question which might be easily tried; but it is improbable, that, if the lord should be very unreasonable in his demand upon such an occasion, the Legislature would sanction his opposition to a measure that, if carried into effect, might greatly tend to the interest of the community, as well as that of individuals.

'CHAP. XII.DRAINAGE.

“ He who can make two ears of corn, or two blades of grass, to grow upon a spot of ground where only one grew before, will deserve better of mankind than the whole race of politicians put together.” SWIFT.

AND surely he who should essentially promote the drainage of hundreds of thousands of acres of land, which have, from the beginning of time, been in a wet unproductive state, by which they shall become highly fertile, would deserve no less of his country!

Under this chapter I expected to have found not only some traces of the *comprehensive mind* and some efforts of the *extraordinary genius* of Mr. Young, but a display of at least some practical knowledge upon the subject of drainage: a species of improvement of which the county of Lincoln stands greatly in need. But I regret to add, that attempts of this kind have generally fallen short of that degree of perfection which, in most

other cases, is within the power of human attainment.

Even with respect to Deeping Fen, particularly noticed by Mr. Young for objects of little or no importance, a more certain and perfect plan of drainage might have been adopted; for, I believe, since the period of Mr. Young's survey, the whole district of Deeping Fen has been drowned, the immense personal property of the occupiers destroyed, and the cultivation procrastinated for a considerable time.

Mr. Young has touched very lightly upon the subject of drainage, and yet he could not be unacquainted with the distressful condition of the county in that respect. In order to shew that it was considered by the Board as a subject of great importance, I shall add some extracts from my report as I proceed.

Those who have no particular knowledge of the Secretary's method of communicating information, and who have read his Report without receiving any further intelligence upon the subject of drainage, would reason-

ably conclude that the works had been constructed with vast judgment and effect. But their surprize will be greatly excited upon being informed that another Report * had been published, by the authority of the Board, only five years before, containing various remarks upon this important subject, and pointing out particular instances where the country was suffering immensely from the total neglect of this most valuable of all improvements, as well as from the incompetency of those works already carried into execution. Mr. Young, however, turns his back upon all this, without a single observation. His Report does not even agitate the subject.

How far this is consistent with the duty of a man very handsomely paid by the public for exerting his utmost ability and employing his greatest industry for the benefit of that public, I shall leave to my readers to deter-

* Mr. Stone's, published by the Board in 1794.

mine. But the sequel will develop this point, as well as many others which he has treated in like manner.

There are upwards of three hundred thousand acres of land at this time in Lincolnshire, suffering at least, on an average, three hundred thousand pounds a-year for want of an efficient drainage, which might be carried into effect for one or two year's improved value; and upon the borders of the county nearly the same quantity of land, connected with it, capable of similar improvement by similar means. When this statement shall be explained, and the truth of the remark established, what will become of Mr. Young's table of forty-three thousand four hundred and seven acres? [p. 245.]

Low land in Lincolnshire, as in various other counties, will become the most productive in the kingdom, when properly drained.

Mr. Young entered the county of Lincoln from Wisbeach. But how a man of his *discernment and regard for the interest of the county*

he undertook to survey, could cross the single arch of the bridge there over the river Nene, into which all the water, issuing from some hundreds of thousands of acres, falls, in its passage to the sea, without being informed of the imperfect drainage of the great levels of the fens, and of the extensive tracts of land that are frequently drowned by the breaches of the banks of this river ; and, if informed, without expending one drop of his ink upon the subject, must, surely, be a matter of astonishment to those who are unacquainted with the general tendency of Mr. Young's reports !

The circumstances are as follow :—The river Nene passes through a competent waterway at Peterborough bridge, of one hundred and thirty-four feet ; consequently the channel between that place and Wisbeach need not of necessity be much wider.

The fens are embanked on the north and south sides of the river with soft materials, dug up from them ; and immediately below Peterborough the distance between the

banks increases so much, that, in the midway between Peterborough and Wisbeach, they are nearly a mile asunder. As the river approaches Wisbeach, and within six miles of the town, about Guyhern, it again contracts, and at Wisbeach its only passage is through a single arch of seventy-two feet diameter. About six miles below Wisbeach the river water arrives at the shifting sands, and the embankments are again extended to the distance of several miles, and admit the tides.

The scheme of embankment of the Nene, between Peterborough and Wisbeach, originated with Bishop Morton, in the reign of Henry VI. and the expanded part of the river between the aforesaid places for about fourteen miles in length, as I understand, retains the name of 'Morton's Leam,' and by many of the inhabitants that of *the Wash*.

In seasons moderately dry the river is confined in a channel near the north bank; but in times of flood, which happens more frequently now than in former times, on ac-

count of an extended navigation from Oundle to Northampton, the internal drainage of lands upwards, in the interior of the country, promoted by inclosures and the improved agriculture, the water comes down with more rapidity, and more quickly expands itself from bank to bank. It rises high upon the banks, and when it is thus expanded, and a high wind blows for a certain time, in any direction, towards either side, the water, on account of the great distance from bank to bank, acquires an agitation which creates a heavy lashing surge, that, beating upon the soft materials of either of the banks for any length of time, is almost sure to make a breach. The effect of this is the inevitable drowning of an immense tract of fens. The last happened in 1794, which laid 100,000 acres under water, and occasioned the loss of an immense quantity of corn, thrashed and unthrashed. The live stock was with much difficulty saved.

The best remedy for this evil, that sug-

gests itself to me at present; is, first, to make a capacious cut from the deep water, near a point called Boat-mere Creek, probably across the manors of Lutton, Long Sutton, &c. to a point in the Nene, near Guyhern, to Morton's Leam, where a grand overfall in the north bank should be made, to convey all the water to sea, above a level necessary for the Wisbeach navigation. It would then be requisite to bring the south bank of Morton's Leam, for the whole extent, within a *reasonable* distance of the north bank, leaving only a sufficient width for a river, which, by this means, would acquire a proper depth for navigation; and the fen countries on both sides of Morton's Leam would be entirely secure. The expence of this undertaking might be defrayed not only by the immediate improvement of the adjoining estates, in consequence of the security that would thus be afforded to them, but also by the proprietors of the land between the banks, (which is now a mere wash,

subject to be overflowed by every fresh of water from the high country) from the security and consequent advantages they would likewise derive from the measure.

The navigation from Wisbeach to the outfall is now, from various causes, choaked and become very indifferent, on account of the shifting sands in the Wash towards the sea ; so that of late years vessels of any considerable burthen are prevented from coming up to the town of Wisbeach : they generally are unladen at Peter's-point, about six miles below it. A cut might be made from Wisbeach, or from the end of the Wisbeach river, as may best answer the purpose, to convey the Nene water, reserved for the purposes of navigation, into the proposed new drain ; or a cut to the Eye might be made from Wisbeach, in a new direction, by which the Nene water from the high country would be diverted from its present ancient direction below Wisbeach, over the Wash, to sea. If such, or any other efficient plan were executed, that vast space of sands, containing at

least 20,000 acres, could, at no very remote period, be blocked up with silt, and converted into dry land of considerable value. Probably it might, upon due deliberation, be more expedient to carry all the Nene water down the proposed new cut or river, from Guyhern to Boatmere Creek, and to make a navigable canal from Wisbeach to its nearest point, for the convenience of trade. But these are matters of nice investigation, and require more deliberation than I can at present bestow on them.

Another method of converting the sands from their present state of unprofitableness might be to continue the channel of the Nene nearly in its ancient direction, to confine it to one side of the Wash, by means of piles, forelands, jutties, &c. But as by this method the tides could not be excluded, it would be subject to miscarriages, delays, and of course a certainty of perpetual expence: and this the more evidently, as it has been proved, by experience, that the whole

body of the Nene water, for a series of years, has not had sufficient force to scour out or keep open a certain channel from Peter's-point to the Eye. But which ever mode be adopted, so that 20,000 acres of space, now alternately covered with water and dry twice in the space of twenty-four hours, shall be converted into safe good land, must be considered as a great object to the country and to the community: and if the scheme were executed on a broad and general plan, the proprietors would soon be amply remunerated for the expence.

Mr. Young had not travelled far from Wisbeach into Lincolnshire, before he passed over the large undrained district of South Holland, containing thirty thousand acres. The interest of the proprietors of this district has long suffered great delays for want of a competent drainage, many thousands of acres having, for time immemorial, been wholly unproductive, which, when drained, will be some of the best land in the

country. The other parts, though less infested with water, suffer greatly for want of this improvement; in most instances the property is not half so valuable as it might be made, at an expence very small, compared with the immense benefit to be derived from it.

About six years ago an Act passed for draining, preserving, and improving this district.

The water through the new sluice meets with great obstruction, and has, I fear, to make its way through high shifting sands, before it can get to the Nene waters in the main channel; which latter ought to have been directed, confined, and continued close by this sluice; and, I am sorry to add, the drainage of that district is almost wholly impeded and ineffectual as to the lower parishes, which most wanted it. To conclude this unpleasant history, the South Holland cut and the Shire drain, in order to have produced the utmost benefit, ought both to have been carried into

deep water at Boatmere Creek, where it would have found a free and unobstructed discharge.

The drainage of Deeping Fen, so improperly commended by Mr. Young, is chiefly effected by three wind engines above Spalding, that lift the Deeping Fen water into the river Welland, (the bed of which, I apprehend, is now higher than the land intended to be drained) assisted by a side cut, called the West Load, which falls into the Welland just below Spalding, and which district, in violent floods, in a calm, when the engines cannot work, is reduced to a most deplorable condition; more especially when the banks of the Welland are overflowed or give way, as happened in 1798, in consequence of an accumulated weight of water, occasioned by violent floods, and the obstructions met with below, from the choaking sands.

The only likely method of immediately draining Deeping Fen is, I apprehend, to make a competent drain by a tunnel, or tun-

nels, under the Welland, into a cut across South Holland to an outfall at Boatmere Creek. But a more comprehensive scheme, in order effectually to drain Deeping Fen, Deeping Commons, South Holland, and, in short, the whole connected country, would be to bring the Welland across South Holland, to an outfall at or near Boatmere Creek. By this method the accumulated body of freshes or high land water would probably secure a certain outfall for a great length of time. This might be found a far more effectual and advantageous plan than to convey the Welland waters into the Witham below Boston. At least, I flatter myself it deserves an impartial investigation. By these means many thousands of acres of washes and sands might be silted up and made dry land, whilst a canal from Spalding to Boston Scoff would supply all the purposes of trade and commerce.

The above observations are merely hints thrown out with a view to promote a competent investigation, and not the result of it.

I have not the presumption to suppose that these ideas are new or original ; but if they are right, the greater is the reproach due to those whose duty it was to carry them into effect long ago, instead of obstinately persisting in error. Of this my readers may be assured, that the schemes and works of drainage, which have been or are attempted to be carried into execution in various districts of this part of the country, are short-sighted, and will prove far less effectual than others which might have been accomplished at the same expence. In many instances attempts are made at cultivation, yet the lands are not so productive by one-half as they might easily be made, provided some great leading influence, possessed of adequate knowlege, was to promote a combination of interests and purses, in order to bring together the parties interested, to act upon enlarged comprehensive schemes of drainage. It is not to be expected that a private individual can, at his own expence, furnish correct plans and esti-

mates of such schemes and undertakings, however practical they may be. It is enough for him to point out the general outlines.

Surely in objects of this importance the Board of Agriculture, as it is an institution of a public nature, might exert itself to call forth talents calculated to promote the investigation and adoption of plans of such unquestionable public utility; nor perhaps could its funds be applied to better purposes. The Earl of Dundonald, in his excellent ‘Treatise shewing the intimate Connection between Agriculture and Chemistry,’ published in 1795, delivered himself upon this subject as follows :

‘The loss sustained by individuals and by the public, from the late breaking of the banks, and consequent inundation of the cultivated fens in Cambridgeshire and other counties, necessarily calls the attention of the proprietors of fen estates, and the Legislature of this country, to a more judicious and complete system of general drainage of that

great level. The late destruction of the banks, and loss sustained, may probably be the means of uniting, in one natural and judicious plan for their mutual advantage, the hitherto distinct and opposite interests of individuals and of neighbouring communities. This is most likely to be accomplished by adopting the method of drainage recommended in the Appendix to the very able Report of the Agricultural Survey of the County of Cambridge; by which plan there is reason to believe that the fens might be wholly, instead of being partially, drained: an object of too great importance to be overlooked, or to be thwarted by the confined or mistaken plans of any class of men, or the interested motives of any particular place or borough, with a view to make such place or borough the mouth or outlet, and consequently the shipping port to the fens so drained. To such objects, the general interest of the many, and the nation in general, are too frequently sacrificed. It is not those who propose the best plan of a general

drainage, line, and direction of a canal, or rendering a river or rivers navigable, who carry their point; but it is those who can procure most friends in the two houses of Parliament. Many judicious plans of canals, and of rendering rivers navigable, have been rejected, and the interest of proprietors of an established *ditch* of a canal has been allowed, to prevent the cutting of canals of much more general utility and importance.

‘ The late accidents which have happened to the fens, by the breaking of the banks, should lead to an impartial survey and consideration of the most judicious method of draining this valuable country at the lowest possible level, so as to avoid the raising of the water, as has hitherto been the case, to a much higher level than is said to be necessary.

‘ On this subject it is proper to remark, that exclusively of the main central drain, or drains, carried at the lowest possible level, and according to the natural and old established course of the waters, sufficient drains

or water courses should be made to skirt or surround the whole of the fens, cut on the dry or solid land above their level. It is obvious, that by thus guarding the fens from their great and principal feeders which come from the upland country, there would then require to be drained, or to be raised from the fens, only that proportion of water which may fall on their superficies. The Agricultural Surveyor of Cambridgeshire seems to be of opinion, that the general bed of the fens is sufficiently elevated above the level of the sea to drain itself. This fact is of too important a nature not to be fully and minutely *inquired into*, as in the event of its being established, not only the fens lately under cultivation, and now drowned, might in future be more securely and effectually drained, but an addition of one hundred and fifty thousand acres of undrained and unreclaimed fen land, in the county of Cambridge *alone*, would accrue to the agriculture, or the cultivation of this country. Should the fens not be capable of being drained completely

by any sea level, and that the water should require to be raised, the most judicious method of proceeding would be still to conduct the water to the lowest level, and which will be found to be nearest to the sea, and then by a sufficient number of windmills, or other engines, to lift it over the great sea bank. Some well constructed fire engines would at *certain times* be of material service to the drainage.

‘Fire engines employed in the accomplishment of a great and national object, should be exempted from duty on the coal required to work them. The expence of fuel might still farther be diminished, by making use of the refuse small coal made at Newcastle in working the larger and more valuable sorts. This refuse coal may there be had at two shillings and three pence per London chaldren of thirty-six Winchester bushels, and of which about one hundred thousand such chaldrons are annually brought from the pits for the purpose of clearing the under-ground workings, and are allowed to decay, and

perish on the bank. Were this quantity of *refuse* coal allowed to be applied, duty free, to such like, or to other important national objects, many beneficial consequences would thence arise; the public revenue could not suffer by exempting this at present waste or refuse article from duty for the working of fire engines, or the burning of lime; still any limited or partial exemption from so injudicious a tax as that on water-borne coals, would be far short of the advantages, which, by a total repeal of the duties, would ensue to agriculture, manufactures, mines, machinery, navigation, or extent of shipping, and the health and comforts of the great body of the people in this humid and northern climate. An exclusive duty on coals carried coastways, may be deemed a *prohibition* to the rearing of *seamen*, and a *bounty* on the breeding of *horses*. It is truly astonishing that so glaring an absurdity has not hitherto been corrected. The late requisitions, and very *strong but necessary steps* taken by Government, to procure seamen to

defend our Island from foreign invasion, show whether it is to *horses* or to *seamen* we are now to be indebted for our defence. In Scotland, the duty on coals is repealed, and an additional duty on spirits substituted in its stead. In this respect, the inhabitants of South Britain would do well to promote a similar plan of commutation.

‘ The draining, inclosing, and properly cultivating the fens and peat-mosses in Britain, would, by rearing and feeding a greater number of cattle of all descriptions, allow a greater proportion of the higher and drier lands to be kept in tillage; whence would be produced a greater quantity of grain and animal food. The present inhabitants of Great Britain would be more reasonably and plentifully fed and cloathed, and a considerable surplus would be left either for exportation, or for the maintenance of an augmented number of people.

‘ Population would increase as plenty is secured. The additional produce of the earth would not only feed a greater number

of inhabitants, but would provide them with constant employment in the manufacturing of wool, hides, hemp, and flax, the internal productions of our own Island, instead of relying upon a precarious supply of some of these necessary articles from foreign states; and lastly, *emigration, the constant attendant on scarcity, would no longer rob these kingdoms of their only defence.*

In order to shew that Mr. Young did not set out upon his survey without having received some hints as to what particular objects his attention might be profitably directed to, I here insert some additional extracts from my agricultural report, published by the Board in 1794.

‘In the southern part of this county, called South Holland, a main cut, or drain, is now making, by authority of Parliament, from a place called Peter’s Point, to Wheatmeer drain, near the hamlet of Peakhill. This cut will most certainly facilitate the drainage of this district. And another cut, intended to be made (in a similar way to that of the

Eau-Brink cut from the Ouse, in another district) to confine the course of the Welland to a narrower channel, from a certain point below Spalding, to a more certain and deep outfall than the present, at Wyberton road, will most certainly tend to promote the drainage of Deeping Fen, and other low lands in this county. This appears to be part of a scheme suggested by Lord Chief Justice Popham, in the beginning of the last century, and afterwards touched upon by Sir Cornelius Vermuden, Colonel Dodson, and several other engineers of the last and present century; and it proves that our predecessors have suffered these excellent plans to lie dormant for a long period, as no new idea has been started upon the subject, or any thing offered which had not been previously suggested or recommended by antient engineers. But, notwithstanding the certain prospect of of general good, which presents itself upon the adopting of the last mentioned plan, it meets with opposition, from local circumstances connected with trade and commerce,

which, it is hoped, will be accommodated between the parties before a bill is brought into parliament; otherwise, it cannot be supposed, that the good sense of the legislature will suffer objects, evidently short-sighted, and of a very inferior nature, to weigh against the general improvement of a very large tract of country, which, when ameliorated by the means proposed, will, by the increase of every commodity produced from the land, throw into the pockets of even the opposers of the measure a very considerable balance of gain, if even the existence of the ground of complaint should be admitted; yet, I must freely observe, that none of these plans seems to me to be sufficiently general and comprehensive. Before new outfalls are made, taxes imposed, and terms settled for draining intermediate estates, &c. &c. the whole country dependent upon, or likely to be affected by any intended measure, should be invited to partake of the proposed advantage. It should be pointed out to the parties, how their interests are likely to be affected; and

a calculation and estimate should be made of the quantity of water likely to be brought down to the outfalls, upon a *general* scheme of improvement, or who can answer for their being sufficiently capacious? The imposition of an equal tax, by the acre, for any purposes of drainage whatever, must prove oppressive to some individuals, and will remain so as long as the benefits to be derived from the measure are unequal and the qualities of land shall vary. I recommend, therefore, all drainage-taxes to be laid according to the value of the respective improvements. This country, though low, and subject to be overflowed in winter, very frequently suffers from drought in summer; as water is obtained with difficulty, in dry seasons, for the cattle depastured on the land; and the retaining of the summer waters, or freshes, in the main drains, for fences, and in order to scour out and cleanse the outfall at sea, is absolutely necessary, or it would be in danger of being choaked up. This can only be remedied by *confining the rivers to narrower*

channels, shortening and straitening their direction to competent outfalls. In many instances, it would be a very dangerous practice to suffer the river waters to be let out, and exhausted for the purposes of the occupiers. I would recommend to the landed interest, to examine carefully for springs of water upon their property, which would be a means of remedying the inconveniences each way herein before pointed out, and which, I am inclined to think, may be easily brought to bear, at no very considerable expence, in wells and pumps. In the north marshes I have lately promoted the searching for, and obtaining, the uses of inexhaustible springs of good fresh water; and, I lately saw, upon the sea bank at Theddlethorp, an excellent spring of that kind. An improved drainage of the fens may be accomplished in the most salutary way, *when-
ever the inclosure of the East and West Fen com-
mons, and Wildmore Fen, are accomplished by a
general well-digested plan.*

‘Wherever engines are necessary to facilitate a drainage, I recommend the steam-engine to accompany the wind-engines in any considerable work ; because it too frequently happens that a calm succeeds an abundant fall of rain, for a considerable length of time. The steam-engine may be immediately set to work, at a time the most desirable, and when the expence of firing cannot be set in comparison with its advantages ; and whilst the wind-engines remain useless, those which will throw up one hundred hogsheads of water per minute, many feet, may be constructed at any place near a navigation, for about six or seven hundred pounds. Messrs. Bolton and Watt, of Birmingham, are very likely able to supply them.’

It may now be properly observed, that as the sea presses hard upon the banks of one part of the coast of this county and retires from others, the attempt at drainage, through the high shifting sands below Fosdyke and Cross-Keys Washes,

ought now to be wholly abandoned. Our present object should be directed to find outlets for the internal waters at such places as are most clear of impediments, and bring thither the largest body of high land water we can collect, in order to clear away all obstructions which may arise at and below the outfall. Yet even after the utmost efforts of human foresight, a series of years will probably require similar exertions, in order to extend the present proposed plans. Let us, however, hope our successors will find progressive advantages to result from them, viz. the acquisition of several hundreds of thousands of acres of land when reclaimed from the sea washes, to repay them for their labour and expence.

Having considered the subject of drainage for the fens, I now proceed to make some observations upon this important subject as it relates to other descriptions of land, viz. the drainage of strong, loamy, clayey, and mixed soils.

Upon this subject also Mr. Young had the benefit of my former observations, which are here quoted.

‘ The commons in the Isle of Axholm, surrounding some of the most fertile, strong, loamy, soils in the kingdom, may be here justly instanced. These commons and wastes contain upwards of twelve thousand acres, which, divided and inclosed, would, for the most part, make very valuable land, being in considerable parts of a clayey bottom; but, in their present state, they are chiefly covered with water, and in summer throw forth the coarsest productions: the best parts, which are those nearest the inclosed high lands, are constantly pared and burnt, to produce vegetable ashes to be carried on them, in order to force repeated crops of white grain. The more remote parts of the common are dug up for fuel.

‘ On account of the general wetness of these commons, and their being constantly overstocked by the large occupiers of con-

tiguous estates, in such seasons as the depasturage is desirable, in order to ease the inclosed land; the cottagers cattle and sheep necessarily depastured thereon are but scantily provided for in summer, and generally destitute in winter; therefore always unthrifty, and subject to various diseases, which render the commons very unprofitable to such occupiers.

‘ The drainage of the commons of the Isle of Axholm will not be a very difficult undertaking, provided the outfall is made into the Trent, at a certain point, *probably* below Waterton. Hitherto the drains necessary to convey the water to the Trent from Hatfield, otherwise Hatfield, and the adjacent country on the Yorkshire side, have been carried over the isle commons, into that river, too high up, in the way of the tides and floods, which over-ride the sluices and goats, and will operate as a bar to the improvement of the drainage of the commons: and lately, by authority of Parliament, a

canal has been made in a similar way across them.

‘ I am informed that the isle commoners are empowered, by a clause in that act, to drain their commons by means of tunnels, to be laid under this canal ; but, during the time all the improvements of the adjacent county were completing, the isle commoners have been unfortunately dormant, and have greatly delayed their interest, in not draining their commons, by a sufficient general parallel cut, down to the best possible outfall that could be obtained, which might have received, by side cuts, all the water from Haitfield, and the Yorkshire side ; and which would serve to scour out and deepen such general cut, not only in its progress to, but at the outfall.

‘ The drainage of this description of high land property is generally neglected. The ditches ought to be made in a suitable manner, to prevent the soak of one field injuring the produce of another, and to carry off the

water which falls upon it, and also by means of hollow draining the springs that rise thereon. I recommend the main drains to be made, in most instances, not less than five feet wide, and four feet deep, with a general connection to an outfall, funnels being turned over gate-ways of equal depth with the ditches. The lands which are ridged up to a great height to be ploughed, lowered, and made of less width, by any means, the most effectual to prevent the burying the natural soil, and the bringing a dead earth upon the surface in its stead.

I will undertake to prove the truth of the foregoing remark, by an examination made by competent practical husbandmen, and that in nineteen parts out of twenty the soils of this description, in this county, suffer very considerably from not being under the practice of draining above recommended.

The Earl of Dundonald makes the following remarks upon the drainage of this description of property :

“ Draining of ground in the northern and

humid climate of Britain and Ireland is indispensably necessary, and is the precursor to all culture and improvement of the soil.

‘ The principal object in draining, is to free the surface from moisture at those seasons when it would prove hurtful.

‘ Water constitutes the chief food of plants: it is decomposed in the process of vegetation, the plant retaining the hydrogen or inflammable air, as well as the calcareous matter held in solution in the water, whilst the oxygen or vital air, the other component part of water, is disengaged.

‘ Certain degrees of cold prevent the absorption of water by vegetables. Water, during the continuance of such degrees of cold, is of no service; its presence at those times generally proves inimical to the future growth of plants. On this account, rain, during the cold and chilling winter months, is injurious; whilst warm summer showers are attended with a contrary effect: hence, when vegetation is not advancing, or

but slowly proceeding, the ground should be kept as dry as possible.

Considerable benefits ensue to certain soils by artificially watering the ground at certain seasons ; yet much greater, and more extensive advantages to the soil, and to the agriculture of these kingdoms, would result from more complete and general drainage of the surface. What is most important to be done, should ever be done first, and the attention of the farmer should not be called away to other objects, such as the irrigation of meadows, until he had relieved his lands of the injurious surface water, and laid them sufficiently dry ; previous to which, the full benefit that may arise by irrigation, or the judicious application of water at certain seasons, cannot be expected.

The different mechanical operations of draining land are in general so well understood, that it cannot be deemed necessary to enter into a description of them, in a Treatise which has principally in view such

circumstances and matters as have not hitherto, on chemical principles, received satisfactory explanation. Under-draining at this time is very deservedly in great estimation, and is becoming the general practice. It saves much waste of ground, more completely answers the intended purpose, is of longer duration, and ultimately less expensive than any other kind of draining. A method has lately been discovered, and practised with success, by which, in many places, the upper stratum is drained by the assistance of the mineral strata beneath it, through which the water is made to drop, and in this manner taken from the surface. Draining is not only to be accomplished by these judicious methods, and by open drains, but lands are to be made dry by such a mechanical alteration in the component parts of the soil as render it less retentive of moisture. In stiff lands this may be effected by lime, chalk, marl, coal-ashes, brick-dust, or calcined clay, and by sand, when applied in *large* quantities, whilst the too great ten-

dency in sandy or light soils to part with moisture is to be corrected by other applications.'

DRAINAGE OF THE ISLE OF AXHOLM.

SINCE the publication of my Report in 1794, I was appointed a Commissioner for the drainage and inclosure of the commons of the Isle of Axholm. A clause in the act directed the Commissioners to take the opinions of Mr. Jessop, of Newark, and Mr. Hodgkinson, of Arundel-street, London, upon the plan of drainage to be adopted, and to carry the same into execution.

These gentlemen pointed out, as they were directed by the act, the most eligible plans for *draining into the Trent* within the district of the Isle commons; and I do not mean to insinuate any reflection upon their judgment. They proceeded, and reported accordingly: the works have been executed as far as the situation of the country would admit; and the Commissioners have expended upwards of twenty

thousand pounds upon the execution. Near three years have expired since the works were so far completed as to afford a reasonable expectation of success. But, as prognosticated in my Report, the Trent floods, on the one hand, and the tides, on the other, have so over-ridden the works constructed in the banks that the lowest lands, comprising some thousands of acres, have generally continued under water ; and there is but little prospect of success from the present scheme. And, indeed, unless some further artificial works are added, by means of steam or other engines, to lift the water into the Trent, the most considerable, and in case of an adequate drainage, the most valuable part of this vast district will remain only subservient to the purposes of fishing and fowling.

Had the general scheme of drainage mentioned in my Report been attended to and carried into execution, this extensive tract would have been actually drained. This was proposed to have been effected by means of a new river in a direction parallel to the

Trent on the Nottingham and Yorkshire side of the Isle, under an union of proprietors and interests, so that a certain competent outfall might have been gained below Aldingfleet. Upwards of fifty thousand acres of land in Nottinghamshire, Yorkshire, and Lincolnshire, are now, and ever will be overflowed, until the present plan of draining into the Trent shall be wholly abandoned. Besides, the contribution to the expence of this undertaking, on the part of the Isle commoners, would not have exceeded a moiety of the charges already incurred for an ineffectual attempt ; not to mention the eternal expence of upholding and maintaining sluices, dams, engines, &c.

It is a matter of mathematical certainty, that, when a little more light shall, by experience, be thrown upon this subject, and the parties interested shall have their sufferings increased by an accumulated quantity of water forced upon them in consequence of the interior drainage of the higher lands, they then will begin to lament that they have

neglected to avail themselves of this practicable and certain mode of rendering their property secure.

The same principle of drainage, by means of a back river, I conceive, ought to have been adopted on the *south side* of the Trent. There might properly have been such a cut between the high and low land, to drain the back of the commons from Gainsborough to a low point of the Trent, probably below Halton.

By adopting a general plan, the draining of all the districts might have been easily and certainly effected, with an immense saving of sluices and other works, which will, in the end, prove ineffectual.

THE DRAINAGE OF THE LOWER MARSHES.

THIS subject, important as it is, has not been touched upon by Mr. Young, although he visited the district, and had my report on it before him, from which I beg leave to quote the following extract:

I recommend, that the drainage of this

very valuable tract of country be taken, by act of parliament, out of the management of the Commissioners of Sewers, and divided into two, three, or more districts, as shall, upon investigation, be found necessary, for the better drainage and management thereof. For the land-owners in each district, by ballot, or any other more eligible mode, to delegate their interests into the hands of three or more Commissioners, well skilled in the art of embanking and draining, subject to their controul, and removable for misconduct.

‘ To connect the embanking and draining of each district together, as if it was the property of one well-regulated family ; making each respective part of the property contribute its share of expence, in proportion to its share of advantages to be derived from any improvements.

‘ If a plan of this kind were to be adopted, we should not see the occupiers of a frontage town letting their bank fall, from wilful neglect, in order, that when it shall be con-

demned, the whole level may contribute to the expence of a new one ; in which expence their share would be less (as part of a large district) than otherwise in doing their duty by upholding their embankment, as occupiers of a frontage town. We should not see the water held up by narrow passages and crooked rivulets, overflowing large tracts of higher land, from the fear of letting it down upon the works below, incompetent to carry it to the sea. We should not see some towns well drained, whilst others adjoining to them, equally capable, are overflowed. All these evils might be speedily cured, and an immense general saving had, by adopting a plan similar to this which I recommend ; for, by connecting the embankment, and draining of a whole country together, the works will be constantly attended to, and well secured ; the water will be collected together, and carried off in larger bodies to the sea, in the most advantageous places, by which means it will have sufficient power to scour out the outfalls.

‘ The number of goats or gouts may be considerably decreased, and larger portions of fresh water may be spared (if necessary) for the cattle in summer than at present, whilst almost every frontage town has a gout to which (in order to preserve any kind of effect) all the water that can possibly be collected must be sent. I farther recommend, that the ant-hills are levelled upon the pasture land, and upon the arable a similar mode of cultivation adopted, as I have advised, upon strong, loamy, and clayey soils.’

The lowest land in these marshes is the most distant from the sea bank ; being immediately on the edge of the middle marsh: the latter, though wet, and deserving of a treatment similar to that recommended for strong, loamy soils, is yet higher land, and not subject to be overflowed. This description of land within the lower marsh consists of at least twenty thousand acres, for which there is but little or no drainage. Of course this district, which extends for nearly the whole length between the lower and

middle marshes, in a north and south direction, is, in its present state, of little value. But if it were properly drained, and the waters of the middle marsh prevented from oozing upon it, it would become the most valuable land in the district. At present it bears the appellation of '*Rotten Land*,' because sheep depastured on it are constantly destroyed by the rot.

A drain in the lowest line between the middle and lower marshes, carried to an outfall at Wainfleet, with lateral cuts, would effectually drain that part of the district, and improve it fifteen or twenty shillings per acre. Indeed, the greatest part of the remainder of the lower marshes might be improved, by adopting measures similar to those I have hinted before in the extracts from my report, to a considerable value.

PARING AND BURNING.

BEFORE I enter upon the investigation of this subject, one of no small importance, it is requisite to premise, that every agriculturist who has read Mr. Young's Report upon the County of Lincoln, and others of his publications, or has conversed with him upon the subject of *paring and burning*, must be aware, that he is a professed advocate for the *general* adoption of the practice.

I recollect waiting upon Sir John Sinclair, at his house at Whitehall, whilst I was preparing the materials for the Agricultural Survey of Bedfordshire, in company with Mr. Arthur Young. Amongst a variety of agricultural subjects, the conversation turned upon 'paring and burning.' I observed that it was a practice which had done much injury to the landed interest, and, if generally continued or persisted in, would be productive of universal evil. To this our author replied—'Sir, you make the flesh creep upon

my bones to hear you talk. So far from thinking with you, I am of the opposite opinion; and I must hear other arguments than those I have yet heard, before I can be convinced that it is not the desideratum of all agricultural improvements. It is the abuse of the measure which you point at, and not the proper use of it. If you dung your land up to the eyes, and afterwards crop it repeatedly, you will impoverish it as much as by paring and burning.'

Finding that arguments were useless, when applied to a man in whom extreme prejudice had gained so deep a root, I gave up the conversation, and retired; but not without reflecting that such a man was but ill calculated to make fair and impartial investigations upon subjects of so great importance.

Having, therefore, put my reader upon his guard, I shall proceed to state the remarks I made upon it in my report, as well as those of the best practical agriculturists in the Island.

‘ Upon the old ploughed land in the neighbourhood of these commons, which has been repeatedly pared and burnt, the ploughs frequently take hold of wood and the roots of trees, where they had always uninterruptedly gone before, at equal depth from the surface, during the memory of man; which is of itself a sufficient proof, that paring and burning reduces the soil; and such adjacent ploughed land, which was considered higher than the commons when first inclosed, is now eighteen inches lower, which is entirely occasioned by paring and burning; for it cannot be presumed that the first cultivators of this country, since its drowning, would begin to plough the lowest part of it first; nor indeed could it be accomplished, by reason of the water with which it remained overflowed.’

Lord Dundonald, in his ingenious Treatise, published in 1795, makes the following remarks on this subject:

‘ Paring and burning is a comburatory dissipating process, whereby nineteen parts

out of twenty of the vegetable matter, the only substance the fire can act upon, is dissipated and thrown into the air.

‘ This process, no doubt, from its having been carried to excess, and so often repeated as to destroy all the vegetable matter contained in the soil, has, it is said, been prohibited by the Legislature of Ireland,* under a penalty of ten pounds per acre.

‘ Moors overgrown with ling or heath, peaty soils, or soils covered with a sward of coarse unprofitable herbage, and containing a superabundance of vegetable matter, may, with due precaution, be subjected to this process with very beneficial effects. It may likewise be attended with advantages to strong clayey soils, from the effect that burned, or half burned clay has in rendering such soils more open and less tenacious ; in

* It is said that there is at this time a bill in the House of Commons of Ireland, in order to obtain a more extended prohibition of this pernicious practice.

which case the benefit arising from the mechanical arrangement of the soil will probably more than compensate for the dissipation of the vegetable matter of the sward. It would, however, be more economical, when the soil is thus intended to be made more open, to calcine the clay in clamps or kilns, and to spread it afterwards on the ground, either by itself or mixed with lime.

‘ Paring and burning is the process, which, in the cultivation of peat mosses and fens, is made to succeed that of draining. Care should be had to burn only as much of the peat as will yield the proportion of ashes necessary to alter the arrangement of the parts of the soil: an effect which, with still more advantageous consequences, is to be attained by lime, lime-stone gravel, or even by common mould or soil.

‘ It is only from the ashes of fresh or growing vegetables, that saline substances or alkaline salts are to be obtained; none can be got from peat or decayed vegetable matter.

The proportion of alkaline, or other salts, produced by paring and burning, is so very small, that were the benefits immediately resulting from paring and burning to be ascribed solely to these salts, the purchase of them at the market price might, perhaps, be more economical.

‘ The saline matter produced in the process of paring and burning for the most part consists of vitriolated tartar—the alkali of the burnt vegetables combining with the vitriolic acid, which in different states of combination is contained in most soils. Vitriolated tartar has very powerful effects in promoting vegetation; but as it is not to be procured in sufficient quantities to answer the purposes of agriculture, the deficiency is to be supplied by Epsom and Glauber salts, which produce effects equally beneficial when applied to ground.

‘ Although paring and burning has by many persons been much recommended, still it requires great limitations or restrictions.

In some cases it may be proper ; while, in the hands of the unskilful, it may be attended with the most pernicious consequences.

‘ If all the benefit that can be derived by this practice, could hereafter be attained by the application of lime, alkaline salts, neutral salts, &c. without risk of any of the attendant disadvantages on the process of paring and burning, a decided preference, of course, will be due to methods that render this practice less necessary.’

Mr. Vancouver, in his Report of the Agriculture of Cambridgeshire, has thus remarked on the same subject :

‘ This practice is admissible to a certain extent upon land, composed entirely of vegetable matter, where the water is at command, and where lowering the surface is not likely to be attended with material inconvenience. Paring and burning is here the only effectual means of quickly bringing land of this description into a profitable state of cultivation. In such land, wherever there is

a considerable depth of vegetable matter, after a few years rest, the surface becomes uneven, resembling a field covered with innumerable ant-hills ; and the tops of these inequalities, producing little herbage, and that of an inferior quality, are only to be improved by a judicious application of the plough, and burning about one-third part of the thinnest of the flag that can possibly be pared. Even here this practice ought only to be permitted under certain restrictions, and performed with great care ; but to extend the same to the thinly stapled high lands in the county, thereby dissipating the vegetable mould, and leaving a surface of cold, sour clay, harsh gravel, or other inert matter, is so highly destructive to the country where it prevails, that in the King's, the Queen's, and other counties in Ireland, where paring and burning the thin high lands have been unfortunately practised, extensive and naturally fruitful tracts have been reduced to the lowest and most exhausted state of barrenness and poverty ; and as the

like effects must for a certainty, under similar circumstances, follow the same practice in this kingdom, it is not so easy to comprehend the reasoning of those persons, whose judgment leads to the general recommendation of so pernicious a system.'

Mr. Vancouver, in his Agricultural Account of the Lordship of Thorney in the Fens, consisting of twenty thousand acres, the property of the Duke of Bedford, remarks as follows: 'Pare and burn but with great care;' and after describing the course of husbandry he observes further, 'afterwards laid down with seeds for not less than six years to rest.'

Mr. Billingsley, in his excellent Report upon the Agriculture of the County of Somerset, delivered his opinion upon the subject as follows:

'Burn-baiting, that is, cutting off the turf, drying it, piling it in heaps, and afterwards burning it to ashes, has been tried, but no sensible good effect, either immediate or distant, having been experienced, the prac-

tice is relinquished ; and I rather think this process is best calculated for cold, rushy, and heathy grounds, of little or no value.

‘ The effect of burn-baiting, even on lands best adapted to this process, does not last more than three or four years, and if followed up with successive corn crops, the strength of the land is so exhausted by the *forced fertility*, that a *rest* of eight or ten years is necessary to prepare for its repetition. If burn-baiting be practised, it should be for *turnips*, after which only one crop of barley or oats should be taken, and artificial grasses sown therewith. If this rotation of crops be adopted, I see no reason why lands to which the manure is congenial, should be *wholly* denied the advantages of the practice.

‘ A great deal in these instances depends upon the skill and judgment of the farmer. If he be wantonly debarred from the use of a valuable manure, he is injured ; and if, on the other hand, he uses it without discretion, his landlord suffers, and the most indefati-

gable industry will not save himself ultimately from loss, and perhaps ruin.'

Mr. Edward Stone, late of Leverington, near Wisbeach, who has had great experience in the management of fen estates, in answer to some queries put to him by Mr. Vancouver, when on the survey of Cambridgeshire, upon paring and burning, delivered himself as follows :

' On the fen lands this practice is general. The toughnes of the fen sward is such, that it will not fall to decay, nor be got to pieces unless burnt. Cole seed on fen land will not feed sheep, unless the land producing it is burnt, to prepare it for the cole seed. An excess of this practice often consumes a great deal of the soil, and when the land is laid down, *a barrenness where this has taken place is very apparent.* Goose-grass (or clivers) is the general symptom of this impoverishment. Breast-ploughing is certainly the best method; it may be done thinner, and more uniformly, than by the plough drawn by horses, though the latter is the practice

of this country. And indeed I do not think the damage done by burning arises from the burying of the sward, or the quantity pared off, so that it exceeds not one inch and a half or two inches, but from the fire getting hold of the land, from allowing the heaps to lie unspread too long, and not watching the fire carefully, and putting it out immediately after spreading, before it gets such hold of the land as to make it difficult to be extinguished; the fire then *bites*, as it is called, and this is very prejudicial.

Mr. Edward Stone has also communicated his opinion to me on this subject, which I take here the liberty to introduce.

April 14, 1800.

SIR,

ON the probability of seeing you on my late route, I suspended my answer to your letter; but being disappointed of that pleasure, I will now reply to it, as clearly and fully as I am able.

In respect to burning of fen land, the occupiers would, if unrestrained, do it, and

do it most excessively, every fourth or fifth year. It cleans without labour, and enriches (*temporarily*) without manure. But this has nothing to do with the good or ill effect ultimately arising from the practice. With a view to this end I will endeavour to consider it.

‘ I have occupied, during the last ten years, a fen farm of my own. It consists principally of the black vegetable soil or peat. The practice of the district in which it lies has always been that of bringing the sward land into cultivation by the process of paring and burning. I fell implicitly into this practice, observing that men of long experience and good success in business had uniformly adopted it. Its effect in producing very luxuriantly the vegetable crop, cole-seed, generally grown on fen land, and giving to that crop the quality of fattening the sheep that ate it, must be admitted. It seems, too, that the heat communicated by the fire to the peat soil is highly conducive to fertilizing it, as the plants of the cole-seed

are far more vigorous in the spots where the heaps were burnt, though the ashes were left thinner on those spots, indeed were almost wholly spread from off them, than on the other parts of the surface on which the ashes were wholly spread ; so that, of the fire and the ashes, I conceive the former to be by far the strongest stimulus to vegetation.

‘ Thus the effect of this process is clearly extended to the cole-seed, which, being fed off with sheep that tread, compress, and manure this light soil, gives to the land the capacity of growing an abundant crop of corn. Where paring and burning is a new process to the soil it is practised upon, it will, after the cole-seed, enable it to bring two ample crops of corn in succession ; but I have never seen its effects of *greater duration than for two crops*, except in particular instances, where more was to be attributed to the natural soil than to any artificial treatment of it ; and therefore on such exception no general argument can be grounded.

‘ The foregoing, considered as the bene-

ficial effects of paring and burning, induced me at first to adopt it, and since, indeed, to continue it. But the continuance has been thoroughly against my conviction. When we are sometimes engaged in the process of burning, a severe drought sets in, attended with brisk winds: the fire then gets hold of the land, and so much soil is consumed as lowers the surface beyond all calculation. Indeed, independent of this event, all peat soil that is pared and burnt, is lowered just as much as the thickness of the sward pared from off it, because the whole of it consumes so very nearly. In burning the vegetable peat soil, every experienced man will acknowledge, that the heaps become reduced in size not less than four-fifths, and that the residuum is a light ash, which in the act of spreading will, in a brisk wind, be principally blown away. In proof that burning the vegetable peat soil, however well conducted, lowers the surface, and particularly where the fire catches the land in the way I have described, besides the demonstration of the lowered

surface to the eye, we find, in the late wet winters, that in all the parts of our lands where we had the most fire, we have the most water ; and that where the surface has been most burnt, it is first drowned and last drained.

‘ Setting aside the self-evident disadvantage of lowering the surface, before too liable to be drowned, I am satisfied that ultimate impoverishment of the little remaining soil is the certain consequence of extreme burnings, in as much as wherever this has taken place, the land, when laid for grass, refuses to produce the grass seeds sown upon it, and goose-grass* is its spontaneous produce.

‘ The practice of manuring the light vegetable peat soil out of itself has ever appeared to me as irrational as it would be to amputate some of the limbs of an animal body to add strength to the rest, repeating the practice till all were cut off. To justify and to illustrate the use of this figure, I can

* This plant is evidently produced from a root a considerable depth below the superstratum of soil.

point out land that has been so extremely burnt by repeated burnings, as to have no vigour or soil remaining; in short, all its limbs are amputated, and there is no strength remaining in the body.

‘ The soil I speak of consists of decayed vegetables almost solely, which are entirely sterile till they have advanced so far to a putrescent mass as to have become nearly black. Burn off all the soil of that colour till you come to the vegetable matter less decayed, called, provincially, bear’s dirt, and it is altogether unproductive, and incapable of fertilization.

‘ I would have it understood, Sir, that the foregoing observations are wholly confined to paring and burning the light black vegetable peat soil, unmixed with any heavier stratum, which is the common soil of fens in general.

‘ Now, as I have condemned the practice of paring and burning such a soil, I expect it will be asked, what substitute is it that I propose, capable of effectuating all the good purposes resulting from the practice I con-

demn? To this enquiry I will also allow to my examiner, that paring and burning enriches, compresses, and cleans from weeds and injurious reptiles (particularly wire-worms) the light sort of soil in question, and that repeated ploughing and tilling of such soil would, by rendering it so extremely light, rather injure than benefit it.

‘This, I think, is granting all that the most acute and zealous advocate for the practice of paring and burning such a soil can claim. I will even consider him to be an old farmer, grown rich by burning and making his landlord’s ground poor, and of course much prejudiced in favour of the practice he has held. Should he be grown so rich as to have purchased a farm similar in soil to that he has acquired his wealth from, my answer will be opportune, because he may, turning my answer to its right use, increase his money without lessening the value of his land. To such a one, or any one else, my answer is in one word, viz. *‘the fold.’* For instance: if a man has two hundred acres of the sort of land above

described, I think it should be held in a five course shift. This would afford forty acres of cole-seed every year ; and four hundred loads of manure should be made annually upon the farm. In the winter, ten loads per acre should be laid upon the forty acres, to come in course for cole-seed : this should be ploughed thinly in, and no faster than the fold could go over it ; the sheep folded, grazing it during the season of folding. Here I must tell my examiner, that I would set aside an old practice, which, by enriching a little, and that but for a time, consumes much, and that for ever ; whereas the practice I propose encreases what it enriches, compresses far more than the other, and is the most effectual antidote to the wire-worm ever yet attempted.

‘ Paring and burning, however, I still hold in the highest esteem for a soil so heavy that, when the heaps have passed the fire, they are scarcely the less for it, or only so much the less as the consumption of the vegetable matter they contained will make them. On such a soil the fire cannot catch the land, nor burn it into holes. I therefore

consider it as the best way of bringing old coarse sward land, overgrown with ant-hills and pry-grass, into cultivation. On such land it is as much to be approved and recommended, as condemned and forbidden on the other. The fire will fertilize the soil, without diminishing it ; and it will grow excellent turnips after the surface is brought to a level, and the sward converted into a strong alkaline manure. Whereas, to level the land, and rot the sward without the aid of fire, immense labour and expence must be bestowed.

‘ I remain, Sir, &c.

‘ EDWARD STONE.’

Mr. Nathaniel Kent, a gentleman well-known for his skill, ability, and long experience in the management of landed property, and an author of a book of very considerable merit, entitled ‘ Hints to Gentlemen of Landed Property,’ (to whom Mr. Arthur Young, in the fourth volume of his Annals, page 353, imputes a very different

motive for writing than ought in candour to have been imputed to him) delivered his opinion on this subject, in the following letter to the author :

‘ Ripon-Hall, 23d January, 1800.

‘ SIR,

‘ MY objection to the practice of paring and burning land is so far from being lessened, that it is strengthened by subsequent observations, and I lament that a writer of Mr. Young’s eminence should be so decided on the other side of the question. If he had been bred a farmer’s son, as I was, when the custom was too prevalent, and had, like me, during thirty years close attention, remarked its pernicious effects, I am persuaded he would have reprobated it with as much energy as he now recommends it. I doubt most of those men in Lincolnshire who have given Mr. Young his information on this subject were either interested or ill-informed. Mr. Davis, in his masterly Agricultural Report for Wilts, observes “ that it is a maxim

quoted there, that, however good the husbandry may be for fathers, it is ruin to sons." In short, it is destruction to a shallow soil, and though a tenant will sometimes find his account in adopting it upon a coarse surface, such as there is a great deal of in the fenny parts of Lincolnshire; yet even there, if I were the owner or agent upon an estate, I should not admit it without great caution, and if admitted for once, should carefully bar the repetition of it. There is no doubt but it would be much better if the rough sward could be inverted, covered, and left to rot, and, in the intermediate time, made to carry potatoes and such sorts of plants as would derive their nourishment from it, and by their roots tend to separate and loosen its cohesive quality, so as to forward its pulverization when it is again brought upon the surface.

‘ I am, &c.

‘ NATHANIEL KENT.’

Mr. Davis, of Long Leat, Steward to the Marquis of Bath, has also favoured me with

a letter on this subject, of which the following is a copy :

Horningsham, 2d February, 1800.

SIR,

I was equally disappointed with yourself in not meeting you when I was in Bedfordshire. When I again take that journey, I hope to be more lucky. I am not certain when that will be, but I hope it will be before the end of the year. I hope then to have the pleasure of conversing with you on several branches of agriculture, as well as on rural economy in general, and particularly on the subject of paring and burning land. On this head Arthur Young's opinion is, as it is on some other subjects, totally different from mine. In fact he has, at different times, and on different occasions, given such contradictory opinions, that I almost doubt whether he has really made up his mind on any subject, and I once took the liberty to tell him so, in answer to a very rude illiberal attack he made on me in the public Agricultural Meeting at Bath.

‘ My opinion on “ burn-baiting,” (as we provincially call paring and burning land) is, that it is a very powerful medicine, which, in the hands of an able physician, *may* do good, but is much more likely to do harm. In fact, like other strong medicines, it is only suited for very strong constitutions, and is death to a weak one. It might in the early periods of agriculture be right, but the custom has continued after the cause has ceased to exist. For instance, I date its origin in this island, and perhaps in other countries, from the time land was first reclaimed from its primitive state of woodland. The wood was grubbed up, the brambles and rough grass were chopped up with a kind of cutting mattock (called a “ beak”) which brought up roots and earth together, and then, after saving such wood and roots as were fit for fuel, the residue was burnt, merely to get rid of it. The land was then ploughed up, if a plough could be made to pass in it; and if not, the wheat was sown and chopped in with a mattock, and levelled

with harrows. This was once the mode in all countries, and is still retained in many, when circumstances render it necessary ; and in *strong, deep, sour woodland*, no management can be equal to it, as it not only gets rid of the roots of the rough grasses which would be a long time in rotting, but also sweetens the land, and makes it fit for a succession of crops, as well as the first crop of wheat.

‘ But unfortunately the experience that this mode was not only an *alterative* to sweeten sour land, but also was a *stimulus* to make weak land expend its whole strength in one or two crops, has been the ruin of thousands of acres of land.

‘ Tenants commend it to the skies, because it puts the *fee simple* of the land into *their* pockets, at the expence of their landlord or his heirs : and landlords, and sometimes stewards, who have more good nature than good sense, too often hearken to those whose interest it is to deceive them. I look over many estates in Devon and Cornwall,

in Gloucestershire and Hants, where the custom is practised, and have made up my opinion on it. In heavy strong lands, where the soil is deep, and the sward apt to run to coarse grass, furze, &c. as in Cornwall, it is perhaps necessary with their kind of management (viz. using three times as much manure as the quantity of land diminished), and I don't know how their strong clays, after being kept many years in pasture, could be pulverized so well in any other way. But as burning certainly makes land more friable, it can never be right to make *light land lighter*: it therefore is fundamentally wrong on loose spongy lands. And yet these are the soils on which Mr. Arthur Young recommends it. The consequence must be, that the roots which hold the land together, and have been a century in forming, are destroyed all at once, and it is the work of another century to get a sward equal to the former; and, as *arable land*, it is totally incapable of bearing any crops after the first or second. This has been the case with thousands of

acres of the best turf on Wiltshire Downs, and will always be the case where used on loose soils, especially if they are *thin* as well as loose. I fear I have, by this time, exhausted your patience as well as my paper, and must, therefore, reserve the rest till I see you, unless you will come and see me here.

I am, &c.

THOMAS DAVIS.

And now, Mr. Arthur Young, after trespassing upon my reader's patience a little, in giving the foregoing extracts, which you will, probably, say are merely matters of *theory and opinion*, I will enter the county of Lincoln with you, and try how far you have reported matters of *fact* upon this important subject.

Notwithstanding the instances mentioned by Mr. Young in his Lincolnshire Report, where paring and burning have generally received the approbation of the *tenantry*, and sometimes that of the proprietors of estates, particularly that of Mr. Chaplin and Mr.

Ellison, whose observations are subject to this limitation, that the lands pared and burned shall remain in their own hands and under their own management, he does not inform us that Mr. Chaplin or Mr. Ellison have allowed their tenants to practise it as a necessary process in the cultivation of their large estates. 'Lord Brownlow suffers the practice but *once*.' Now, if it were a good one, why limit his tenantry to the exercise of the process but '*once*?' Besides, Mr. Young admits that Lord Brownlow's Bailiff, Mr. Abbott, who cannot be called a 'visionary theorist,' but a plain, sensible practical husbandman, is decidedly against the measure. Why is he against it? Because his experience of many years tells him that, in the long run, it is prejudicial to the interests of both landlord and tenant. And though under the practice of paring and burning, the land produced three quarters of barley and four of oats per acre, it would have followed probably, if the question had been fairly put to Mr. Abbott, that, if paring and burning had

not been previously practised, the crops would have been *five quarters of barley and seven of oats*. The rent of the land, 'nine shillings per acre,' proves nothing. It might have been worth twenty.

Mr. Young tells us, that those landlords who are against this practice 'should secure themselves by the clauses of their leases.' He ought to know, that, if a farmer adopt a practice which impoverishes himself or his farm at the outset, the clauses of his lease will not restrain him from pursuing the same course afterwards. He further remarks, that upon the parishes of Londonthorpe, Spittlegate, Welby, Harrowby, &c. being first broken up, the land was 'pared and burnt;' but the landlords, in these, and in almost every other case he mentions, have afterwards restricted the tenantry from doing it more than '*once*.' I must again remark, that, if the practice be a good one, why limit it to *one operation*? But Mr. Young tells us, that it is reported, that, in Welby, the rents, which were seventeen years ago at nine shillings per acre, were sunk in 1795

to seven shillings, because the lands had been pared and burnt. This is a notorious fact. If Mr. Young had doubted it, he might have informed himself from the proprietor of the estate.

We are told, that paring and burning is very common on the wolds about Brocklesby. Mr. Young says, ‘ I enquired particularly for some fields, if any such there were, that had been *ruined* by this practice: but though many had been *ill-managed*, none could be found that were materially hurt.’ It is for the ingenuity of Mr. Young to find out fields that have been *very ill-managed*, without having been *materially hurt*.

It appears, from several intimations given us by Mr. Young, as he has proceeded in his report, that it was a practice with him to examine such gentlemen as he occasionally met with in his tour, or was advised to call upon, who, he conceived, were able, and whom he found willing to give him information upon all the subjects to which he intended to direct his enquiries; and we find

the names of certain very respectable and intelligent gentlemen brought forward, repeatedly, upon various subjects in the former part of his report.

Though Mr. Young has quoted the opinions of some noble Lords and respectable gentlemen in favour of the practice, yet, when he mentions Mr. Dickinson, Lord Yarborough's steward, as having given him information upon some subjects of less comparative importance, he has not thought proper to bring forward his opinion upon this subject; though he is a man who, in the management of his Lordship's immense landed property in the county, must have had frequent opportunities of weighing and marking the effects, and of forming his opinion upon the merits of the practice. And I should have been better satisfied if Sir Joseph Banks, Major Cartwright, Mr. Harrison, Mr. Stevenson, Mr. Parkinson, Mr. Hoyte, Mr. Grayburn, Mr. Trimnell, Mr. Hessleden, Mr. Parker, Mr. Walker, Mr. Moody, Mr. Linton, Mr. Holdgate, Mr.

Smith, Mr. Hyde, Mr. Pearson, Mr. Bourne, of Dalby, Mr. Bourne, of Hawe, Mr. Richardson, Mr. Cluff, Mr. Goulton, Mr. Tynnell, Mr. Thorald, and a great many other gentlemen, farmers and graziers, whom we find Mr. Young examined upon a variety of subjects, *had given their opinions upon this.* From the known activity of the mind of the reporter, there are very few persons who will suppose he did not make the enquiry, and I leave others to conjecture whether the opinions of the last-mentioned gentlemen were for or against the practice.

And if it will be of service to Mr. Young, with regard to the conclusions he draws as the result of his enquires, I will assist him, by going back into the previous section of this chapter, and bringing forward the opinion of Mr. Hill, tenant to Mr. King.

Upon a full investigation of the few authorities Mr. Young has thought proper to bring forward in behalf of the practice, in comparison with the many he might have obtained against it, he is by no means war-

ranted in drawing conclusions in its favour. And I hope I shall be excused for a little prolixity in recapitulating and commenting upon the opinions and arguments on which he founded his approbation of this mode of husbandry.

In the first place, Mr. Hill, *tenant* to Mr. King, is friendly to the measure. If I recollect right, I was employed in letting Mr. King's farm to Mr. Hill, some years ago, for a short term of years, which, at the time Mr. Young made his survey, was nearly expired: and at the time I examined the estate I was perfectly convinced, both from the appearance of the soil and the information I obtained from others, that it had been pared and burnt ONCE at least since the first breaking up. There were evident marks of impoverishment occasioned by that practice. I thought it proper to restrain the tenant from repeating it. But that Mr. Hill, *as tenant*, may be desirous of burning it again, is a point on which, before I quit this subject, I shall make some comments.

Mr. Elmhurst here admits a stubborn fact, viz. ' that in drained fens, after paring, burning, and ploughing, the lands are eighteen inches lower than they appeared to be before.'

All he observes upon it afterwards, viz. ' that the lands, by paring, &c. have been made ' firmer' and of a more ' solid' texture than they were before, and *of course lower,*' is merely his opinion. The remainder of the remark, upon the causes which produce the effect of lowering, belongs to Mr. Young: and here he seems to express himself with a diffidence which I did not expect, and which he probably did not recollect when he drew the result of his enquiries upon this important subject: because he says here, that ' it will be difficult for any one to prove that any of those lands have been really reduced and lowered eighteen inches entirely by the fatal practice and reprobated mode of *burn-bating.*'

Mr. G.'s account is that of a *tenant* who pares and burns fen land for the first time, and probably put the value of the inheritance at twenty years' purchase of the

rent into his pocket in the first four years, and then is ready to resign it, and begin upon another large tract of maiden fen. This account proves nothing, without shewing us the progressive state of the same land when laid down with seeds for six or seven years, and afterwards again converted to tillage. Mr. Young has not said a word about the *rent*, or the landlord's *permanent interest* in this procedure. The MS. of the Board I shall mention hereafter.

The lands in Londonthorpe, Spittlegate, Welby, Harrowby, &c. as before observed, have been pared and burnt *once*. The instances are very few where they have been burned *twice*. It is stated by Mr. Young, with great truth, that the rents of one of those parishes, Welby, which, as before observed, had been pared and burnt, have been lowered, in seventeen years, from nine to seven shillings per acre. In those parishes Mr. Young found a 'prejudice against the measure.' I wish he had been so good as to tell us with whom that prejudice remained. May I, without any charge of want of can-

dour, conclude that it exists with the *landlords*? I am warranted in this conclusion, because we are immediately informed that the farmers are convinced 'that their profit depend upon it.' 'Lord Brownlow, in some instances, permits the practice.' But, as appears from Mr. Young's Report, 'he ties them up to pare and burn but *once*.' This does not prove that he considers the practice as highly beneficial, or likely to improve his state.

His Lordship's Bailiff, Mr. Abbott, is decidedly against the practice.

At Leadenham, it does not appear that Mr. Young found a landlord who interested himself about the management of his estate. But even there, in a side wind, he tells us that (except in a few instances) the practice is confined to *one operation*: and he also tells the reason for its being practised at all, as if there had been some fundamental objection to it *behind*, viz. because upon the first breaking up the heath there was no 'other way of killing the sedge and other

rubbish, and where burning had been practised a second time it was after seeds that had been *rested** seven or eight years.'

Charles Chaplin, Esq. as before observed, a gentleman possessing one of the largest landed estates in the county, 'has pared and burnt a certain quantity of coarse gorse upon a hungry gravel, in his own occupation, and it was considered an improvement;' and then Mr. Chaplin is said to have given an opinion upon the practice of paring and burning on the Lincoln heath land as follows, in Mr. Young's words:

'Upon the heath land it has been much practised here, and has not been attended, in Mr. Chaplin's ideas, with any ill effect, though improperly cropping and running the land after it has occasioned some pieces intended to be kept in tillage to be thrown back again to warren; but not resulting

* The term 'rested' implies a previous tiring, or having been hard driven or exhausted.

from the burning, as is evident from others better managed remaining good.'

I cannot help again observing that here is not a word said about Mr. Chaplin's allowing the practice of burning to be applied by his numerous tenantry.

'North of Lincoln, on the new inclosed heath, all broken up by paring and burning, but now debarred by landlords from being repeated.' Can any man read this remark without concluding that the landlords of the above vast district have universally debarred their tenants from this practice upon any other ground than that they found it to be injurious to their estates?

'In the rough clay land behind Gainsborough,' &c. Mr. Dalton thinks paring and burning 'right on this soil;' on other soils Mr. Young has not given that gentleman's opinion. The conclusion to be made is sufficiently obvious:—he was generally against the practice.

'Paring and burning is very common on the wolds about Brocklesby,' the seat of

Lord Yarborough. Mr. Young visited this place, and, as before observed, made many enquiries of his Lordship's Steward, Mr. Dickenson; but his opinion upon this subject is, as before observed, withheld.

Mr. Lloyd at Belesby is totally against the measure.

‘On the wolds near Louth much practised:’ and although Mr. Young attended the market ordinaries here, and in another part of his Report mentions opinions taken down from Mr. Hyde, Mr. Fowler, and others, who reside in that neighbourhood, upon a variety of subjects, *not a word upon this.*

‘Mr. Kershaw, of Driby, breaks up saint foin by paring and burning.’

Here is no assertion that Mr. Kershaw repeated the practice.

Mr. Elmhurst in his long dissertation proves, that he ‘never pares and burns a second time,’ and that upon the pared and burnt land ‘there scarcely ever come any weeds.’

Mr. Loft's case appears to be more con-

clusive in favour of the practice than any other Mr. Young has yet recited. Yet, no man who is ever so much averse from the measure, will deny that the effect which Mr. Loft states cannot fully take place for the first three or four years. But how will it appear for the succeeding twenty or twenty-five years? It is to that the landlord is to direct his attention.

‘The Reverend Mr. Allington, of Swinop, has made various observations upon the effects of paring and burning.’ This gentleman’s observations have led him to a conclusion, that ‘*though there are fields in a wretched state which have been burned, they are not in a worse state than other fields not burned, but managed with regard to cropping equally ill*’ Here I must beg leave to deny the matter of fact stated by Mr. Allington. I will refer the proof to the same mode of decision to which I have challenged Mr. Young,—I defy him to prove what he has above stated as a fact, and if he

fail to establish it, all his reasonings and conclusions upon it must fail also.

I conceive that the main question in a great degree hangs upon this point.

‘ At Stainton, I rode through the beginning of some improvements made by Mr. Otter.’ As that gentleman’s opinion upon this practice is not given, I shall forbear to make any comment in this place, except that in this operation, Mr. Otter is acting as an agent; and there are manifold reasons to be given why an agent may be induced to adopt a practice which in his private opinion he may condemn.

‘ Mr. Ellison, at Sudbrook, has practised this husbandry largely.’ This gentleman’s experiments seem to have been made in much the same way, and with the same views with those of Mr. Chaplin; and, though he possesses a large landed estate in Lincolnshire, it does not appear by Mr. Young’s Report that he has suffered his tenantry to adopt the practice.

‘ Much heath land broken up by paring and burning at Skellington, Gunby, North-Witham, Stainby, &c. and it succeeded well, but they have done it only *once*.’

It is wonderful that the landlords of the above places should be so very short-sighted as not to suffer a practice ‘ which has succeeded well’ to be repeated. I must now request the reader to pause for a moment, and particularly the late President of the Board of Agriculture, under whose auspices Mr. Young’s excursion was made, if he condescends to read this publication, to weigh the extreme candour of Mr. Young in bringing forward his result.

The arguments of Mr. Elmhurst and others, in favour of the practice, are long and laboured, and consist of several pages. But those of the late Mr. Lloyd, of Belesby, who was a very intelligent well informed man, and to whom Mr. Young resorted for his opinions on various other subjects, are ‘ much against the practice.’ He is not allowed one solitary argument in defence of his opinion.

He is dispatched in two concise lines ; and not a single argument is allowed to Mr. Abbott.

From the particular extracts already taken from Mr. Young's statement, without resorting to others which might be adduced, it is perfectly clear that paring and burning is a practice which, among practical husbandmen, has been generally reprobated. If I were to leave the subject here without adding another word, I flatter myself that no gentleman of landed property who has read Mr. Young's recommendation of the practice, and my comments, would permit the adoption of it upon his estate, at least without very particular limitations and restrictions. From every observation made or recorded by Mr. Young, there appears to be some very generally allowed evil at the bottom of this practice, which induces the landlords to be careful how they admit it, although the operation is not particularly described. This remains now for me to point out.

In the fens, wherever the practice is adopted, the soil is evidently made lower or

reduced in quantity ; the evil of which is increased every time the practice is repeated. Not as Messrs. Young and Elmhurst would have us suppose, that this is occasioned by its being rendered more firm and solid, but from an effect quite the reverse. Even where the fire does not ‘ hit,’ or burn more soil than the cultivator intends, the substances upon which it acts are extremely light in their original state, and they are rendered lighter by burning.

Dissipation is the consequence of this practice, as Lord Dundonald observes, ‘ a considerable portion of the vegetable matter being thrown into the air.’ Nay more ; it is a common circumstance to see the finest particles of the soil in the spring months, particularly in March, when it has been acted upon by frost, blown by the dry easterly winds from the roots of the plants of wheat, and drifted like snow to a great distance, leaving them bare.

I have frequently attempted to walk upon fen land in this state ; when the effect has

been exactly like that of walking upon a heap of ashes, my feet would sink in some inches, and the soil close upon them.

Besides, this process is the means of reducing and lowering the soil, which must be considered as a serious evil, where every inch of soil reduced or taken away renders the drainage more difficult.

It has the property of anticipating and converting a considerable share of the landlord's permanent interest in the soil to the immediate benefit of the tenant, without his expending one shilling more in the act of accomplishing it, than will be repaid him seven fold in the first year.

The immediate effect of this husbandry upon the soil is to convert all the fresh growing vegetable matter into saline substances; and by means of the fixed alkalis in the vegetable ashes, mixed with the soil when ploughed, &c. every particle of matter which can be acted upon is forced and converted into mucilaginous food for plants.

Hence, after two or three very florid crops,

the saline products of the burning are wholly exhausted by dispersion in the air, by entering into the new vegetables, or by forming neutral combinations with the soil, which is then unfit for the support of vegetation.

Thus the soil becomes a mere *caput mortuum*, a condition which it never could have been reduced to by any other process, not even by the severest driving or impoverishment; yet I am sorry to differ with the Rev. Mr. Allington, a very sensible and intelligent man, who has given a contrary opinion. The process of burning not only destroys the roots of plants, whether good or bad, but also the largest portion of their seeds; therefore, whether the burnt land be continued in a state of tillage or laid down for grass, no plants, whose natural region is a superstratum of earth, can possibly be produced without being previously sown; and if grass-seed were to be sown after this process, without some very extraordinary improvement to the soil, foreign to the general practice of Lincolnshire agriculturists, no growth would spring from them. After the

process of paring and burning has been completely pursued, the superstratum is entirely sterile, and we only perceive the plant which is here commonly called 'goose-grass.' Moreover, when the generality of fen farmers, who practise paring and burning, attempt to lay their land down to 'rest,' they are disposed to sow the coarsest and (what good upland farmers call) the worst ray-grass they can find, in order to produce a kind of mat upon it: which, in the first place, prevents the soil from being blown away; and in the second, if it succeed to their mind, will the sooner be ready to burn again.

The produce of the land, when thus laid down in a state of 'rest,' will best be estimated by those land-owners who have their farms to enter upon, or to let, after, in the true and literal sense of the words, they have been thus 'weighed in the balances, and found wanting.'

Hence has arisen the extreme wariness mentioned in almost every instance by Mr. Young, of the tenants being restricted to

commit this practice but *once*. There has been a variety of instances in the fens, within my observation, where the soil has been so completely worn out by this practice, that the occupiers have declared that nothing could possibly restore its natural powers but what they called ‘a good drowning for a year or two.’ This is an excellent consideration for the landlords.

Lincoln heath, the wolds, and light loamy soils have been pared, burnt, and ‘ploughed out,’ to the extreme loss of the *proprietors*, though some of the tenants have, from time to time, enriched themselves by the practice; particularly those who shifted from place to place, in pursuit of ‘maiden land’ to operate upon and exhaust.

When we enter upon Lincoln heath from Stamford, the first estate is that of Nevile King, Esq. in the parish of Ashby, which was inclosed within the last thirty* years. It

* See Mr. Young’s Report of this estate, p. 388, which places this subject in a very different light.

was subdivided and planted with live fences, pared, burnt, treated in the above method, turned again to rabbit warren, and left in the proprietor's immediate possession. When I looked over it, about five years ago for Mr. King, it seemed, at my first view, as if some great calamity had befallen the property. I could see only decayed buildings, broken down fences, exhausted soil, with every appearance to denote bad management.

Lands in this state are to be found upon soils of that description, in every direction, on the wolds,—lands which were originally rabbit warrens, and were afterwards pared, burnt, and ‘ploughed out.’

If pasture land be broken up without burning, and ploughed to the last extremity, no part of it is dissipated, and something convertible to food for plants yet remains in it, which, when gathered and brought into a state of putrefaction, will make some reparation for the injury it has sustained. But this, as before observed, is not the case when

it has been sterilized by that justly reprobated practice of paring and burning, *which converts every atom of matter, capable of being acted upon, into food for plants, and is immediately drawn, out as effectually and completely as sand is from the inversion of an hour-glass.*

If any gentleman travelling along the north road is desirous of viewing the consequences of this practice in its utmost extent, I advise him to stop at the public-house near the church at Ponton, about sixteen miles on the road from Stamford towards Grantham, and enquire for and view the allotment which was set out there under the inclosure act for tythes; upon which the destructive effects of paring and burning will immediately present themselves.

In the North Marshes * too evident marks remain of the miserable condition to which paring and burning has reduced the soil of

* A district particularly noticed by Mr. Young.

various parcels of land. There you may observe land returned again to pasture, of which a stranger, without knowing the cause, would conclude that it had the curse of God upon it. On a flat district various parcels of considerable extent are so reduced in condition, and lowered in the staple,* and consequently wet, that the surrounding divisions of property are from twenty to thirty shillings per acre of more annual value. Indeed the baneful effects of burning in this district were so much dreaded that the practice has for a considerable time been generally exploded. The MS. of the Board, p. 247, which has been brought

* Mr. Wedge, an eminent surveyor, engineer, and valuer of land, informed me that he was not long since valuing some fen estates near Ely, and particularly a farm in the occupation of Mr. Barwick, at Wilbarton, a very experienced fen farmer, and on going over some very low fen land, Mr. Wedge inquired of him if he wished to pare and burn it? 'No,' (replied Mr. Barwick) 'that is already much too low; if I was to burn it I must necessarily make it lower, and put it compleatly into the water in winter.'

forward upon this occasion, appears to be dictated by the same kind of spirit by which all Mr. Young's writings are characterized. And it is to be remarked, that these observations do not comprehend paring and burning as a part of the process, which is said to 'stiffen, concentrate, and diminish the lighter kinds of fen soils:' but, as this practice evidently contributes to diminish the quantity of the soil, it ought to be comprehended in the process.

I deny the assertion, that the practice does not occasion the dissipating and reducing of the soil of fen land. Can it be supposed for a moment that our forefathers were so stupid as not to begin to cultivate the highest parts of the low ground first, by which means they had the greatest chance of having their labour repaid with a crop? It is, therefore, in the highest degree probable, that the arable land, which is now lower than the adjoining commons, was originally the highest, but has become depressed by this vicious mode of agriculture. After all that is said by the

author of the theoretical remarks in the MS. of the Board, I deny the existence of the pretended causes which have led the author to his conclusion, viz. 'that decayed vegetables, the dung of animals, and the mud and soil brought upon depastured fen land from the higher neighbouring lands,' are the causes of the present differences between the height of the arable and that of the pasture fen lands.

If any small partial difference between these grounds had subsisted for a certain time (which I do not admit), the frequent drownings of the fens would in effect have nearly equalized their condition; because the dung of animals and decayed vegetables would be washed away, and the lowest lands would from time to time receive the largest portion of the manure with the sediment of the water; hence it is reasonable to conclude that the cause of the difference in height between the pasture and arable of fen lands must have been occasioned by fire; for though earth is not to be dissipated in any material degree by burning, the vegetable matter of

which the upper stratum is chiefly composed, soon becomes greatly reduced by the operation of it.

From the foregoing disquisition on this subject, it will, I flatter myself, appear that paring and burning, as a general practice, is not the process by which a system of good husbandry can be established:

That where it has been practised most, and more particularly where it has been repeated, evident marks of sterility remain:

That Mr. Young is not warranted by the enquiries and investigations contained in his Report, to draw any of the conclusions he has given:

That in the best cultivated counties in England, particularly in Norfolk, Suffolk, &c. &c. paring and burning is a process rarely practised, and now scarcely understood: and, finally, that its tendency is to allow the tenant to *anticipate and seize upon the interest of the landlord, and to possess himself, in three or four years, (without any material expence) of all the benefit which, under a regular*

course of husbandry, he would be a long term of years in obtaining.

I entertain little doubt of seeing shortly in practice a process far less hurtful than paring and burning, and equally beneficially with it in the particular cases where it ought to be applied.

[Paring and burning ought only to be allowed under the following limitations and restrictions:

Upon fen land lately drained, where it may be impossible to subdue a variety of coarse productions, and to level it in any other way.

Upon fen land with a clay bottom, and a superstratum which requires dissipating and reducing in thickness, in order to allow the plough to sink low enough to touch and bring up a portion of clay to mix with the fen mould.

Upon strong clayey soils, where no other means can be resorted to, after draining, to render them more open and less tenacious.

[I have seen the arrangement of soil of this kind totally changed by the process, and

thus land qualified to produce turnips in succession, which was impossible to be done upon the circumjacent land of the same original quality. But even in this instance I should prefer the plan recommended by Lord Dundonald, ‘to calcine the clay in clamps or kilns, and to spread it afterwards on the ground, either by itself or mixed with lime.’]

Upon a loamy soil at a great distance from a home situation, and where neither marle, lime, clay, soil, manure, nor any means of improvement can be found. The occupiers to be limited and restrained, after this process, from taking two successive crops of corn or grain, and to return to the same land all the manure which its cropping has produced.

But, upon a very light soil, this process, after the most cautious restrictions, will generally be found detrimental husbandry, both for ‘*father and son*.’ Upon soils of this kind, however, marle or clay, after the Norfolk system, will be found in the highest degree preferable. Therefore the hypothesis of Mr. Young, that paring and burning should be

practised indiscriminately upon all soils, and frequently repeated, is unquestionably erroneous.

SECT III.—MANURING.

LIME, considered simply as a manure, cannot have any advantageous effect, unless there are putrescent or organic substances in the soil for it to act upon. In proportion as these are found, its effects will be beneficial. It acts upon them probably in the same manner as saline substances, or alkaline salts, produced by paring and burning: and unless a proportionable quantity of dung, soil, &c. be mixed with lime, where the soil is destitute of such substances, the labour and expence of liming will not afford any abundant return.

The information Mr. Young picked up in some measure verifies this remark.

Mr. Bourne, of Haugh, has observed, that when both dung and lime are laid on the same spot, the effect is considerable; the dung has then a greater effect than when laid on alone.

From a proper use of the foregoing hints, I flatter myself that any practical farmer will be able to reduce the use of lime to a systematic practice. Above all considerations, he ought to be cautious not to lay on too large a quantity at one time, because its operation, like the effects of paring and burning, will be that of forcing the substances upon which it acts too rapidly, and thereby converting every thing into food for plants. Thus one or two great crops will be produced, and the soil exhausted.

In other cases, lime is beneficial to land impregnated with salts of sulphur, iron, or copper, which are poisonous to plants. Dissolved in the acid juices of the soils, lime will attract the acid, and separate it from the sulphur, iron, or copper, by which means the ill effects are destroyed.

‘Lime,’ says the Earl of Dundonald, ‘should be considered in a chemical and medicinal point of view, when so applied, acting as an alterative, a corrector, and a decomposer; a disengager of certain parts of the animal and vegetable substances

contained in soils, and as a retainer and a combiner with others; and is not to be regarded by the practical farmer as a substance fit for the immediate food and nourishment of vegetables, like dung, or decayed vegetable or animal matters. For, although calcareous matter, or lime, forms a component part of vegetable and animal bodies, still the quantity that can be obtained from the annual produce of most crops, from an acre of ground, will not exceed eighty pounds weight. This fact has been well ascertained, and if proper attention be paid to it, in regulating the conduct of the agriculturist, in the future application of lime, it will prove more satisfactory than all the chemical reasonings adduced in this Treatise.

By an over-use of lime in many parts of Great Britain, the soil at this day requires a mode of treatment directly opposite to that practice. Some substance or substances ought to be applied to the soil, which would change the calcareous matter therein from its present state, or separate it from the insoluble combinations it has formed with the

vegetable substances contained in the soil. This valuable improvement may be accomplished by a due application of acids, alkalis, and certain neutral salts, as before directed.

‘ The effects produced on organic bodies by lime, clearly point out, *that lime should never be mixed with dung,** or with any substances which of themselves, or by the application of saline matters, would easily become putrid and rotten. Lime not only puts a stop to the putrefactive process, but disengages and throws off, in a gassious state, a certain portion of the component parts of such substances; whilst, with those which remain, it forms insoluble compounds that are incapable of promoting vegetation, until they are again decomposed, and brought into action by other substances. In making of composts, rich surface mould is, of all substances, that which is most proper, when mixed in moderate quantities, to promote the dissolution and complete putrefaction of the

* A remark made by me in page 230 may appear to militate against this position, but does not in fact. I there only mean that lime of itself cannot produce fertility.

dung. This process would be greatly accelerated by the further addition of a due proportion of the vitriolic neutral salts.'

Marl varies so much in quality, and the persons who speak or write upon it generally mean so many different substances, that it is difficult to define what it is. I am confident, therefore, I cannot do greater justice to this subject than by giving an extract from the work of a very celebrated author.

'Marl,' says Mr. Kirwan, 'is of three sorts; calcareous, argillaceous, and silicious or sandy. All are mixtures of mild calx (*i. e.* chalk) with clay, in such a manner as to fall to pieces by exposure to the atmosphere more or less readily.

'Calcareous marl is that which is most commonly understood by the term Marl, without addition. It is generally of a yellowish white, or yellowish grey colour; rarely brown or lead coloured. It is seldom found on the surface of land, but commonly a few feet under it, and on the sides of hills, or rivers that flow through calcareous countries, or under turf in bogs. Frequently of

a loose texture, sometimes moderately coherent; rarely of a stony hardness, and hence called stone-marl. Sometimes of a compact, sometimes of a lamellar texture; often so thin as to be called paper-marl. It often abounds with shells, and then is called shell-marl; which is looked upon as the best sort. When in powder, it feels dry between the fingers; put in water, it quickly falls to pieces or powder, and does not form a viscid mass. It chips and moulders by exposure to the air and moisture, sooner or later, according to its hardness, and the proportion of its ingredients: if heated, it will not form a brick, but rather lime. It effervesces with all acids. It consists of from 33 to 80 per cent. of mild calx, and from 66 to 20 per cent. of clay.

To find its composition, pour a few ounces of weak, but pure spirit of nitre or common salt into a Florence flask; place them in a scale, and let them be balanced; then reduce a few ounces of dry marl into powder, and let this powder be carefully and

gradually thrown into the flask, until after repeated agitation no effervescence is any longer perceived; let the remainder of the powdered marl be then weighed, by which the quantity projected will be known; let the balance be then restored; the difference of weight between the quantity projected and that requisite to restore the balance will discover the weight of air lost during effervescence; if the loss amounts to 13 per cwt. of the quantity of marl projected, or from 13 to 32 per cwt. the marl essayed is calcareous marl. This experiment is decisive, when we are assured by the external characters above-mentioned, that the substance employed is marl of any kind; otherwise some sorts of the sparry iron-ore may be mistaken for marl. The experiments to discover the argillaceous ingredient (being too difficult for farmers) I omit. The residue left after solution, being well washed, will, when duly heated, generally harden into a brick.

‘ Argillaceous Marl contains from 68 to

80 per cwt. of clay, and consequently from 32 to 20 per cwt. of aerated calx. Its colour is grey or brown, or reddish brown, or yellowish or bluish grey. It feels more unctuous than the former, and adheres to the tongue; its hardness generally much greater. In water it falls to pieces more slowly, and often into square pieces: it also more slowly moulders by exposure to the air and moisture, if of a loose consistence: it hardens when heated, and forms an imperfect brick. It effervesces with spirit of nitre or common salt, but frequently refuses to do so with vinegar. When dried and projected into spirit of nitre in a Florence flask, with the attentions above-mentioned, it is found to lose from 8 to 10 per cwt. of its weight. The undissolved part, well washed, will, when duly heated, harden into a brick.

^{subl.} Silicious, or Sandy Marls, are those whose clayey part contains an excess of sand: for, if treated with acids in the manner above-mentioned, the residuum, or clayey part, will be found to contain above 75 cwt.

of sand ; consequently chalk and sand are the predominant ingredients.

‘ The colour of this marl is brownish grey, or lead coloured ; generally friable and flakey, but sometimes forms very hard lumps. It does not readily fall to pieces in water. It chips and moulders by exposure to the air and moisture, but slowly. It effervesces with acids ; but the residuum, after solution, will not form a brick.

‘ Limestone Gravel. This is a marl mixed with large lumps of limestone. The marl may be either calcareous or argillaceous ; but most commonly the former. The sandy part is also commonly calcareous.

‘ Gypsum is a compound of calcareous earth and vitriolic acid : it forms a distinct species of the calcareous genus of fossils : of which species there are six families.

‘ The general character of this species is,

‘ 1. Solubility in about 500 times its weight of water, in the temperature of 60°.

‘ 2. Precipitability therefrom by all mild

alkalis, and also by caustic fixed, but not by caustic volatile alkali.

‘ 3. Ineffervescence with acids, if the gypsum be pure ; but some families of this species, being contaminated with mild calx, slightly effervesce.

‘ 4. Insolubility, or nearly so in the nitrous acid, in the usual temperature of the atmosphere.

‘ 5. A specific gravity, reaching from, 2,16 to 2,31.

‘ 6. A degree of hardness, such as to admit being scraped by the nail.

‘ 7. When heated nearly to redness it calcines ; and if then it be slightly sprinkled with water, it again concretes and hardens.

‘ 8. It promotes putrefaction in a high degree.

‘ Of the six families of this species I shall describe only one ; namely, that which has been most advantageously employed as a manure. Descriptions of the other five should be found in treatises of mineralogy. It is called *fibrous gypsum*.

‘ Its colours are grey, yellowish or reddish, or silvery white, or light red, or brownish yellow, or striped with one or more of these dark colours. It is composed of fibres or striæ either straight or curved, parallel or converging to a common centre, sometimes thick, sometimes fine and subtile, adhering to each other, and very brittle: its hardness such as to admit being scraped with the nail: commonly semi-transparent; in some, often in a high degree.’

The substances respectively called marl by Mr. Parkinson and Mr. Elmhurst, and the soils they were laid upon, probably differed as much from each other as the faces of those gentlemen.

Mr. Young mentions a hardship Mr. Cra-craft suffers in being obliged to purchase his marl at one shilling per load. Probably out of tenderness to his friend P——n, he does not impart the fact.

Not many years ago, this lordship was inclosed, but perhaps before the use of marl *was discovered in these parts*. Be that as

it may, the Commissioners unluckily set out, allotted, and awarded the *light, loamy, and sandy* soils to Mr. Cracraft, and *all* the *marley* and *clayey* land to another proprietor.

SILT.

THE single experiment made by Major Cartwright, and the uncertain criterion of the soil he worked upon, render the Report upon this subject of no considerable importance. The same may be observed concerning what is said of buck-wheat, at Willoughby.

TIME OF MANURING, &c.

HE who lays his dung upon his land before it has entered into a proper state of putrefaction, commits nearly as great an error as he who suffers it to sink into the last stage of putrefactive decomposition, before he applies it, when the mucilage is destroyed. There is a certain period when a dunghill

is in a proper state of putrefaction to lay upon the land ; and he who does not ‘ hill’ it, and properly mix it, again and again, by turning it over, will suffer, like him who carries it immediately from his yard. In the one, the progress of the necessary decomposition is prematurely interrupted ; in the other, it is suffered to advance till all the richer parts of the manure have dissipated in gas. The tales recorded under this head are unworthy of being called experiments, because Mr. Young must know that the fourth stage of putrefaction is the precise time for setting dung upon land for any beneficial purpose.

BURNT STRAW.

If this practice can succeed well as the means of producing manure, there is not much necessity for the extreme labour of carting out dung from a farm-yard. Had Mr. Young mentioned to his readers a discovery of new or particular properties of the

ashes arising from burnt straw, we might have been enabled to follow him a little into the subject. The ashes of straw appear to me to be the lightest, and yield less alkaline salts than any other vegetable substances, and are the most subject to be blown away or dissipated.

A certain portion of haum or straw for litter is generally considered to be necessary, and more especially in large towns, for litter for horses or cattle, which serves as a sponge to suck up or imbibe saline and oleaginous particles of manure derived from their bodies, and without such means it would be lost to the agriculturist.

The advocates for eating up all the straw by cattle in winter, are probably not aware that even upon *farms* a considerable quantity of such manures would be lost, unless a portion of haum or straw was to be allowed for litter, and applied to such purposes. And probably the cattle would suffer considerably in their condition if they should want a warm,

dry layer, which is now commonly afforded in such situations.

Cattle, when fed upon dry straw, are merely kept alive; and, therefore, certainly produce a less portion of manure than if kept upon more nourishing food.

It does not appear, from the register of the result of Mr. Young's enquiries upon this subject, that he has brought forward any experiment, or made a single remark, by which any practical man will be, in the slightest degree, the wiser for reading them.

The intimate connection that subsists between agriculture and chemistry is now sufficiently understood, in order to lead us some way on the road towards a profitable application of the union. It now only remains for *practical agriculturists* to inform themselves properly of the right modes to be adopted in the application of those experiments which have been judiciously made and set forth by the practical chemists of the present age; taking especial care that the

same determinate ideas are affixed to the same denominations of the various earths and mixtures of soils, and regarding the chemical analysis of soils as the foundation of all agricultural improvements.

SECT. IV.—EMBANKING.

THE following is extracted from my Report, published by the Board in 1794:

‘ I recommend that the draining of this very valuable tract of country be taken, by act of Parliament, out of the management of the Commissioners of Sewers, and divided into two, three, or more districts, as shall upon investigation be found necessary for the better drainage and management thereof. The land owners in each district, by ballot or any other more eligible mode, should delegate their interest into the hands of three or more Commissioners well skilled in the art of embanking and draining, subject to their controul, and removable for misconduct.

The embanking and draining of each dis-

district should also be connected under one plan, as if it were the property of one well regulated family ; making each respective part of the property contribute its share of expence in proportion to its share of advantages derived from any improvements.

‘ If a plan of this kind were to be adopted, we should not see the occupiers of a town letting their bank fall from wilful neglect, in order that when it shall be condemned the whole level may contribute to the expence of a new one, in which expence their share would be less (as part of a large district) than in discharging their duty by upholding their embankments as occupiers of a frontage town,—we should not see the water held up by narrow passages, and crooked rivulets overflowing large tracts of high land, from the fear of letting it down upon works below, incompetent to carry it to the sea,—we should not see some towns well drained, whilst others adjoining to them, equally capable of being so, are overflowed. All these evils may be speedily cured, and

an immense general saving obtained, by adopting a plan similar to this which I recommend; for, by connecting the embankment and draining of a whole country together, the works will be constantly attended to and well secured; the water will be collected together, and carried off in larger bodies to the sea, in the most advantageous places, by which means it will have competent power to scour out the outfalls.

‘The number of gouts may be considerably decreased, and larger portions of fresh water may be spared (if necessary) for the cattle in summer than at present; whilst almost every frontage town has a gout, to which (in order to preserve any kind of effect) all the water that can possibly be collected must be sent. I farther recommend that the ant-hills be levelled upon the pasture land; and upon the arable a similar mode of cultivation should be adopted, as I have advised, upon strong, loamy, and clayey soils.’

Notwithstanding the above hints, which, I

am bold to assert, were at least faithfully and impartially given, and which arose from the necessities of the case, Mr. Young made his tour to ‘*Theddlethorpe*,’ the very centre of the evil, and the Board published his Report in 1799, without noticing the distressful condition of the North Marshes. An advertisement appeared in the Stamford Mercury of the 21st February 1800, which renders this fact unquestionable.*

* DRAINAGE.

* ‘Whereas the lands in the parish of Theddlethorpe receive great injury from the waters, from want of an outfall or a proper communication to the sea; and that by a level lately taken by an experienced Surveyor, it appears that the lands in the said parish of Theddlethorpe might be sufficiently drained through the parish of Mablethorpe, by a cut through Mare’s Bank, at a place called Mr. Bamber’s Orchard Corner, and there to communicate with the waters of the lordship of Withern, and from thence to the sea gout of Mablethorpe aforesaid, without any injury to the lands of the said lordship of Mablethorpe and Withern. And that whereas a considerable part of the lands in the said parish of Withern are also much oppressed with water, on account of the insufficiency of the present works of drainage; and that, by the consent and approbation of the proprietors of the lands of the respective parishes of Mablethorpe and

And in consequence of a meeting convened by this notice, another appeared on the 7th of March following.*

Withern, considerable improvements might be made as to the general benefit of the parishes of Mablethorpe, Withern, and Theddlethorpe, aforesaid: *Notice is hereby given*, That a Meeting will be held at the George Inn, in Alford, on Monday the 24th day of February instant, at ten o'clock in the forenoon, to take into consideration the most effectual mode of draining the lands in the said respective parishes; and that it is earnestly requested all persons interested will attend by themselves or agents.

Theddlethorpe, February 5, 1800.

* ‘ At a meeting, held at the time and place aforesaid, in pursuance of a public advertisement, in this paper of the 14th instant, respecting the drainage of the parish of Theddlethorpe—present,

William Marshall, Esq. Chairman,

Mr. John Greetham, agent for Wastel Brisco, Esq.

Mr. William Taylor, for General Bertie,

Mr. George Allatt, for his Grace the Duke of Ancaster,
and Joseph Allcock, Esq.

Mr. William Carnley, for John Tho. Bell, Esq.

Mr. George Bourne, for Captain Stovin,

Sapsford Harrold, Esq.

Mr. William Pearson,

Mr. Thomas Paul,

Mr. James Paul,

Mr. William Duckering,

A third advertisement, respecting the drainage of the parish of Huttoft in this district,

Mr. Jno. Mason, for himself and for the Corporation of Louth,

Mr. George Chatterton, for the Rev. John Emmerts,

Mr. Charles Dennis,

Mr. Thomas White,

Mr. Samuel Rowel,

Mr. John Saul Walesby,

Mr. William Rainey,

Mr. John Hardy,

Mr. James Boyes, and

Mr. George Parsons,

‘ It was agreed unanimously, That a cut through Mare’s Bank, at a place called Mr. Bamber’s Orchard Corner, into the Mablethorpe drain, is the most eligible for draining the lands in the lordship of Theddlethorpe.

‘ A plan of the works formerly approved of by a Committee appointed at a meeting of proprietors of lands in the several parishes of Theddlethorpe, Mablethorpe, and Withern, held at Alford on the 6th of October, 1795, was at this meeting produced by the Chairman, and again approved of.

‘ This meeting was adjourned to the George Inn aforesaid, to be held on Monday the 24th day of March next, at eleven o’clock in the forenoon : at which time and place the proprietors of lands in Theddlethorpe, Mablethorpe, and Withern, are requested to attend, to prepare full instructions for a petition to the Commissioners of Sewers, for a law to enforce the perfecting the said works, in such manner as may be then agreed to.

WILLIAM MARSHALL, *Chairman.*

George Inn, Alford, Feb. 24, 1800.

appeared, at the same time, in the same provincial paper. *

* 'Whereas at a Court of Sewers, held at Huttoft, in the county of Lincoln, on the 14th day of February last, a petition under the hands of several owners and occupiers of lands in Huttoft aforesaid, on behalf of themselves and the rest of the owners and occupiers of lands in Huttoft aforesaid, was presented and read, setting forth, That Huttoft outfal, and likewise the creek through which the lands in Huttoft aforesaid had been accustomed to be drained, were become so stopped up by the sand driving on the shore, and drifting up the creek, that it was impossible for the said lands to be drained of the waters thereby; that the lands of the petitioners were very much overflowed and injured, and likely to be wholly inundated, without some speedy remedy was applied; and praying the Court to take a view of the said outfal and creek; to order a new drain to be cut on the land side of Anderby sea bank, from Huttoft drain, near the place where Huttoft sea gout stands, into the new cut at Anderby sea marsh; to remove the said Huttoft gout, and set the same down again at a proper distance on the north side of Anderby new sea gout, or to take away the dam or wear out of Huttoft drain between Solomon Waite's lands and lands of Mr. Joseph Louth; to make the drain leading from thence to Anderby common of a sufficient width and depth; to make a sufficient drain from thence to convey the Huttoft waters into Anderby great drain on the north-east side of John Waite's house; to remove the said Huttoft sea gout, and set it down again on the south side of Anderby new sea gout, and to make a new cut from thence into the last new cut in Anderby marsh, that the waters from the lands of the petitioners might issue

It appears by Mr. Young's Report, p. 271, that he has touched but lightly upon this

into the sea out of Anderby new outfal. And whereas the Commissioners then present did order that a view of the said Huttoft outfal should be then taken, pursuant to the prayer of the said petition. And whereas a view of the said outfal and of Anderby new cut and outfal, as well as of several other places in Huttoft aforesaid, proposed for the better drainage of the lands there, was taken on the said 14th of February by his Majesty's Commissioners of the Sewers then present in Court assembled, who delivered in their report in writing, That it was their judgment that the present outfal at Huttoft aforesaid, was in a very ruinous and defective state, and the preservation thereof precarious, whereby the lands in Huttoft aforesaid could not be effectually drained thereby; that it seemed *possible* that the lands in Huttoft aforesaid might be improved in their drainage by taking the Huttoft drain out of its present course to the west of Huttoft sea gout, as near as might be to the north-east end of Solomon Waite's Close, through Anderby common, and conveying the same through Anderby sea bank, about half way between Huttoft present sea gout and Anderby sea gout, and from thence conducting it to Anderby old cut, and from thence along Anderby salt marsh, and then letting it fall into Anderby new cut, at the most convenient place between Anderby sea gout and the Cradle Bridge, lying over Anderby new cut; that such improvement would not be injurious to Anderby run, and that the said dam or wear between Solomon Waite's lands and lands of Mr. Joseph Louth should not be removed to make a drain leading from thence to Anderby common, and from thence so as to convey the Huttoft waters into Anderby great drain on the north

subject, and his remark is merely a transcript of a part of the quotation from my Report above recited.

The other parts of his remarks on this head being merely caught flying, from vague information, I shall forbear to make any

side of John Waite's house, because there was the *strongest probability* it would be destructive to the drainage of lands concerned in Anderby new sea gout and outfal. And the same Commissioners did order the further consideration of the said report and prayer of the said petition to be respited to the next Court of Sewers, to be held at Sutton, in the said county; and that notice of the purport thereof, and of such next Court, should be inserted twice in the London Chronicle and Stamford Mercury.

' Notice is therefore hereby given, That such next Court of Sewers will be held, by adjournment, at the house of John Groves, Innholder in Sutton aforesaid, on Friday the 21st day of March next, at eleven o'clock in the forenoon, and the said report and petition, and the expediency of granting the subsequent part of the prayer thereof then taken into further consideration; at which time and place all proprietors and occupiers of lands in Huttoft aforesaid, and all persons whose lands at present drain by Anderby new cut and outfal, and all other persons any ways concerned in, or whose lands may be any ways affected by the said proposed new drainage, may attend if they think proper, to assent to, or dissent from the same being carried into execution.

By the Court,

BRACKENBURY, *Clerk of Sewers.*

February, 1800.

further remarks upon them. All I shall say is, let any intelligent dispassionate reader observe the subjects of the advertisements before recited, particularly respecting the drainage of Huttoft, and he will not doubt for a moment that the district of the North Marshes is in a ruinous condition with respect to its drainage, and that the Commissioners of Sewers are acting without competent information, upon plans too limited, and without a compass to steer by. If this was not the case they would not in the latter advertisement have expressed themselves so vaguely upon a point of this kind, as to talk of *possibilities*, and *strongest probabilities* of drainage; whilst, in truth, *there is not a district in England, of equal extent, which stands more in need than this of a comprehensive general scheme of drainage, or more easily to be effected, and where the improvement would be greater.*

‘ The sea banks, according to the law of sewers, ought to be repaired and amended from time to time, by the occupiers of lands in the frontage towns; and whenever any

banks are necessary to be erected, the whole district is chargeable therewith; and it is customary to charge the expences by an acre-tax, and not according to the yearly value of the lands, which is certainly, in many instances, where the value of the lands vary, extremely oppressive. But it sometimes happens, that well-timed applications of a small expence, in the due repairing of parts of the banks, might be the means of supporting them for ages; but it is not always considered the interest of the occupiers of frontage towns to repair the banks thereof, and they would rather, in some instances, when they become very bad by neglect, render new ones necessary, to the expence of which they would only contribute a proportionate share with an extensive district.

‘ It is not a custom for gentlemen of extensive landed property, who are most interested, (Sir Joseph Banks, and a few other gentlemen excepted) to attend the meetings of Commissioners of Sewers, and to take the necessary views in this part of the country;

and, therefore, the business of importance, in which the preservation and even salvation of a rich and fertile country is involved, is too frequently carried into execution, upon the votes of those gentlemen, who are not well versed either in the laws or customs which ought to be observed, nor possessed of that practical knowledge which a decision upon objects of so much importance requires; for, however skilful the officers employed may be, it ought not only to be a satisfaction to them that their judges understand their demerits, but a great share of the responsibility and ill-opinion of the country, even in cases of miscarriages that might occur, which no human foresight could prevent, would thereby be taken off their shoulders.

‘ A work of considerable importance, in the bank near Saltfleet, was lately blown up by a tide; which, in the first instance, recently cost the country from 1500 to 2000l. and which is now to be replaced in a more skilful and substantial manner. More discernment in the Commissioners or in their

agents, might probably have prevented, or rendered this expence unnecessary.

‘ It has, in some instances, been a practice in erecting new banks, to retreat some way from the sites of the former banks, as if such retreat was giving a degree of ease to the pressure of the water. This measure ought not to be attempted but in cases of extreme necessity.

‘ I should rather recommend the standing firm to the sites of the ancient banks, until the sea shall so far gain upon the shore that the whole works must necessarily be abandoned for new ones, in a more remote situation. The sea certainly gains upon some parts of this coast, and retreats from other parts ; and in the frontage of the parishes of Summercotes and Marsh Chape, some thousands of acres of salt marshes may now be safely embanked from the sea.’ *

* Stone's Report, published in 1794.

SECT. V.—WATERING.

MR. YOUNG has brought forward under the head of irrigation one solitary instance of its being practised in this county ; and as it has been carried into effect since my Report, in which I particularly mentioned my communications upon agricultural subjects with the person who adopted it, common delicacy prevents me from saying more on this subject. Irrigation cannot be adopted successfully in this county, even where the situations are favourable, till the necessary previous step is better understood and practised, which is a general and particular drainage.

The least expensive, and most effectual mode of irrigation I have observed at Earl Stanhope's, at Chevening, in Kent, and which has been simplified by the judicious directions of the noble Earl. There, very great nicety is observed in taking the levels, and the water lines are set out about ten yards distant from each other, that that element may gently flow over the edges of the cuts

upon the whole of the soil, superseding the necessity of laying out the land in particular forms or compartments, and the use of wears, drains, &c. which, the Earl very judiciously observes, occasion considerable manual labour and expence to make, and afterwards to take away the latter, for the purpose of effecting a drainage. The beneficial effects of this practice at Chevening are proportionately immense.

SECT. VI.—WARPING.

MR. YOUNG has enlarged to a very great extent upon this subject; and judging merely from his statements, his readers must be charmed as it were with a new creation of fertile property. According to his account it appears to be sailing on smooth water. He has not informed them of any of the drawbacks to which the process is liable, and that in every case where it is adopted there is a degree of risque which must be computed and allowed for.

The first part of the process is the erection of a sluice in the bank of the river, which,

even in small concerns, cost, in the first instance, from 600l. to 800l. the next is an embankment to be made around the land, intended to be warped, as the districts capable of this mode of fertilization are often flat to a considerable extent, and generally contain a variety of property in various states, and under various modes of management. Besides, at any rate, only certain portions of land can be warped in a given time, which must be regulated by the dimensions of the aperture of the warping sluice, and the extent of the new embankment. Previously to the opening of the sluice, and letting the water out of the river, the warper must give competent security to the proprietors and occupiers of all the land in the particular districts likely to be damaged or affected by the blowing up of the sluice, breaches of banks, and letting the water in upon their property. And if in consequence of the sluice not being properly piled, grounded, secured, and constructed, or the interior banks being new, and consequently unsettled, (as is very likely, because they are generally made of soft materials)

any part gives way, and the water is let out of the bounds intended to be prescribed, the damages incurred, in a large district, may be immense. So that, to speak truly, under the bond or obligation given by a warper to the district, he may at the opening of his sluice consider himself worth many thousands, or any given sum, and before he can shut it again, he may possibly have incurred a debt to as great an amount.

A warping sluice was erected in the last summer near Butterwick, on the north side of the Trent, not far from Morton Carr, under the superintendence of Mr. Dyson, (one of the engineers mentioned by Mr. Young as employed in constructing the works for warping a part of Morton Carr) for warping some newly divided land in the Isle of Axholme, the property of Sir John Sheffield and Mr. Marris. But, before any benefit was derived from the measure, it was blown up with considerable damage to the country, and loss to the parties. I mention the name of the engineer, not to attach any blame to him, but merely to shew that the great scheme of

warping Morton Carr, mentioned by Mr. Young, is not rendered more secure than Butterwick by any superior skill in the parties employed, and that its success is not a matter of certainty.

Mr. Young has travelled into *Yorkshire*, in a true Irish stile, to find out Mr. Webster at Bankside, in order to observe some *practical instances*, and to gain from him some *genuine intelligence about warping in Lincolnshire*. I am far from imputing to Mr. Young a design to misinform or to mislead his readers upon this subject; but in this case, as well as in many others which occurred in his *Lincolnshire tour*, as I have had frequent occasion to remark, for want of a competent share of practical knowledge upon agricultural subjects, and not being enabled to correct what he heard by what he saw, he has become the dupe and puffer of the vain, the interested, and designing.

Mr. Thomas Mould, of Knedlington, near Howden, a gentleman far advanced in years, of great experience in country concerns, who has long been in the habit of acting as a Commissioner upon drainages and in-

closures, and who has for near fifty years past been employed in almost every provincial improvement in the district of which Bankside forms a part, assures me that there cannot be a more gross and fallacious statement than that which Mr. Young has reported from Mr. Webster, who was a bankrupt a few months after Mr. Young made him the visit ; and instead of his estate being worth from 70l. to 100l. per acre, as stated by Mr. Young, it was sold for the benefit of his creditors by public sale, for 25l. per acre. He also told me that warping was practised at Rawcliff and Armin, about fifty years ago, upon a much better plan than Webster's ; that the accounts of the cropping of Mr. Webster's land, p. 282 and 283, are untrue ; and that the account of Lord Beverley's and Mr. Twistleden's improvements is greatly exaggerated.

I have not made these remarks with a view to discourage adventurers from making experiments, or from adopting the improvement of warping where practicable, but

merely to bring their expectations down to the level of rationality, and to induce them to set about the work with every care and circumspection; and in order to guard against disappointment, to open a debtor and creditor account of probable profit and loss.

CHAP. XIII.

LIVE STOCK.

SECT. I.—CATTLE.

In order to shew that Mr. Young has not made any fresh discovery or gained any new information upon this subject, I am induced to give the following extract from my Report:

‘The neat cattle of this country are, for the most part, of a large sort. The cows, when fat, weigh from eight to nine hundred weight; the oxen from ten to twelve.

‘They are generally large in the head, horns, bones, and bellies; thick, short, and

fleshy in their necks and quarters ; narrow in their hips, plates, chines, and bosoms ; high in their rumps, and their shoulders not well covered ; their eyes small and sunk. Those bred in the common fields are from three to five pounds per head of less value, at four years old, than those bred in inclosed parishes ; and this difference may be attributed to a neglect of shape more than size, and it may be fairly presumed, that the ill-shapen animals consume as much, if not more food, than those which are made with more symmetry.

‘ But, whilst I am stating this to be the description of the generality of the neat cattle of this county, I must, in justice to Mr. Tyndall’s breed, at Ewerby, near Sleaford, and Mr. Hoyte’s at Osbornby, near Folkingham, declare them to be the reverse of the foregoing description ; and, that for true symmetry of shape, lightness of bone and offals, great weight of carcase, and aptitude to become fat, they surpass every breed I

have before seen in the county: and I am of opinion that this kind of cattle will be found very little inferior, in point of agility, to horses, in the cultivation of land.

As the foregoing extra ¶ includes remarks upon Mr. Tyndall's and Mr. Hoyte's cattle, which are mixed with the 'dun breed' said to be introduced into this county by the late Sir Charles Buck, the particular kinds of cattle Mr. Young thought proper to commend, there remains but little for further observation. The result of his enquiries upon the subject, on the comparative merits of the long and short horned breeds of cattle, is a conclusion in favour of the latter which the information he picked up by no means warranted. No such thing as a fair comparative trial appears to have been made, and from the variety of mixtures of breeds which Mr. Young has stated, it will be difficult to accomplish. The authority of the late Mr. John Lloyd, of Belesby, and Mr. Smith, of South Elkington, in favour of the long horned breed of cattle, will have great influence in

directing and forming the opinions and judgments of a majority of those who were acquainted with them till this point shall be ascertained by competent experiment.

It is universally allowed that the long horned breed are the most profitable upon middling or poor land ; and it is undecided, as far as Mr. Young's researches in the county of Lincoln have gone, whether the best sort of this species * are not more profitable than the best short horned breed upon good land. In the whole of Mr. Young's report upon this subject there is opinion against opinion, without competent experiment ; and he leaves the subject exactly where he found it.

I cannot help remarking, that in Mr. Young's Report, p. 296, he records the experiment of Mr. Dalton, of Knaith, and that of his bailiff, without commenting upon it, although it is the same opinion which he

* Which includes the Devonshire, Herefordshire, and Sussex sorts.

highly condemned in his review of my Essay on Agriculture. *

Mr. Young, speaking of Mr. Dalton's grazing, says, 'He is of opinion, in relation to the size of fattening animals, that an ox of eighty or eighty-five stone will not eat more than one of fifty, and his bailiff thinks he will not eat so much.'

In order to shew that I possessed some knowledge upon this important subject many years ago, which neither subsequent experience nor the information of others have induced me to retract, I insert the following extracts from my publication in 1785:

'Every farm is of most advantage to the occupier, which produces or maintains the most valuable stock. A necessary attention to breeding, fattening, or maintaining stock of the highest value any soil is capable of, ought to be the leading principle of every farmer, wherever he may be placed. Yet so little is this object attended to, that in the course of my experience I never saw a farm

* See Young's Annals, vol. iv. p. 354.

stocked to the greatest advantage. I am bold to make this assertion, for I know it to be true; nor have I any doubt of my being able to make it plainly appear. I abhor laboured calculations, which, with regard to experiments in agriculture, have been often stretched beyond the bounds of credibility. I shall offer nothing on this head but what I am confident will meet the ideas of every dispassionate and impartial husbandman, and what is in every farmer's power to carry into execution, without extraordinary labour or expence.

' The great points, which every farmer ought to consider, are these; viz. whether the stock upon his farm is best adapted to the soil and situation, and whether it is of an improving or declining kind. If we consult only the size of animals in a state of nature, they would characterize the soil, or nearly so. Though it is to be remarked, that any spot of good land being overstocked with breeding cattle, will make the stock degenerate with regard to size and shape, till they

become as bad as those bred on poor land. Starving young cattle is sure to spoil the shape of the best sorts * from the Highlands in Scotland, to the rich marshes in Lincolnshire. But it is the formation of animals upon which the valuable quality of aptitude to become fat and heavy depends. Here the skill of the grazier should be displayed in making a judicious choice of stock. Animals are like fruit-trees, which, without being selected and grafted properly, remain in a rude state, and not so profitable to man as they might otherwise be made.

‘ Upon the Highlands of Scotland a sort of

* ‘ In raising young stock of any beast kind, two material points should be invariably attended to, viz. to keep each year’s production as separate as possible; the oldest being too apt to drive the youngest from feeding, especially in confined situations in winter, and thereby take the best of the food away from them. Secondly, that young stock cannot be too much attended to, nor nursed with too much care, to raise them to perfection. Want of attention in these points is sure to spoil the shapes of the best breed, and is likely to destroy that inherent principle upon which I so much depend, viz. the aptitude to become fat when full grown.’

bullock may be selected that will become fat in half the time, and produce one-third more weight, when fat, than others which are of the same apparent size, and fed on the same land. This remark may be extended to cattle in the rich marshes of Lincolnshire, and holds good with regard to all animals in the creation.

‘ Every person the least acquainted with cattle, has some idea of what is commonly understood by a good mould; particularly with regard to horses. There are many instances, that a horse of this kind will be supported in a thriving condition upon food of an inferior quality, and a less quantity, than is necessary for horses of a contrary description, and endure twice the fatigue. Yet lest some of my readers should be at a loss to understand what is meant by a good mould, I shall briefly describe a horse of that sort. He is short legged, deep in the fore quarters, and round, deep, and close in his ribs, his neck of a good length, to take his food off the ground with more ease, his

back straight and short, his loins broad and well filled up, his quarters oval, and his gaskins full. The same observation will hold good in some measure with oxen, and other cattle; except that it is not necessary that oxen should be short in the back, or so close in the rib, or fine in the shoulders; they should also be free from gum, and yet as heavy as possible. The size* of an ox is immaterial, if he is of a proper mould; *one of four-score stone may be fed upon the same land with one of fifty or sixty stone, if he is of a sort apt for feeding.* Very little more aliment is required to support a large animal than a small one.

‘ Whenever it can be done, let care be taken that animals are not bred or brought up upon better land than that on which they are intended to be fatted. But this matter is not so absolutely necessary where a grazier gives his cattle room enough, and does not

* ‘ The same opinion with Mr. Dalton.

overstock the land; and it is of no consequence whatever, when cattle are intended to be fatted with turnips and artificial grasses. The breed of cattle of all kinds may be improved to a great degree of perfection, without improving the land at the same time; therefore this advantage may be immediately attained. An ox or cow of a good sort may be supported in better condition, upon the same land, with the same quantity of food which one of a less value by fifty per cent. requires; the difference of value depending upon the formation of the animal and its age, more than upon the apparent size.

‘ However this assertion may differ from the commonly received opinion, it is true. It has been found so in experience by Mr. Bakewell of Dishley, in Leicestershire, one of the best judges in England of the value and breed of cattle, and may be depended upon. For want of attention to the breeding cattle of a good sort, take England, Scotland, and Wales together, no less than thirty per cent. is totally lost in the value

of all the cattle; and of sheep, a considerable deal more, on account of the wool, which might be improved annually.'

It has been a practice of late for the amateurs in breeding of neat cattle to send into Devonshire, Herefordshire, and Sussex, for the peculiar breeds of those counties. It has frequently happened that some of them have received the respective cattle of these counties of a less improvable sort than such as they might have obtained out of the common herd at their own doors. There are various kinds in every district, and it is the judicious selection of them upon which the advantages depend.

SECT. II.—SHEEP.

MR. YOUNG's report upon this head occupies seventy-four pages of his book; being chiefly a recital of various opinions and common-place observations of several breeders upon the comparative merits of a supposed variety of the New Leicester and the Old Lincolnshire sorts. Indeed a

stranger to the subject, and who was unacquainted with Mr. Young's mode of writing, and the characters and habits of life of the parties who are constantly engaged in contention upon this subject, would naturally conclude, that they are distinct varieties, and as different animals as those of the Crimea and the South-Down.

In fact, however, they are scarcely to be called varieties, but rather the same sort of animal. It is well known that the late Mr. Bakewell, who was the original breeder of the pretended variety of sheep called the New Leicester, laid his foundation upon the Old Lincoln breed, selecting sheep that possessed the most perfect symmetry for his purpose, and afterwards crossing them with others, or breeding into the whole blood. In this, his conduct was regulated by a prospect of producing an animal which would grow to its full size, and become fat, in the shortest given time, with the smallest possible quantity of aliment ; and clad, at the same time, with a fleece better

suited to the demand of the market than the fleeces of the ordinary varieties with which the country was then stocked. In this ingenious pursuit Mr. Bakewell succeeded ; and he became famous for a peculiar breed of sheep, possessing the qualities before-mentioned in an eminent degree. It happened, as might naturally be expected, that other breeders of sheep, within the reach of his fame, embarked in similar experiments, and ultimately profited by the pursuit. Hence several breeders of Lincolnshire sheep, mentioned by Mr. Young, have produced such as, in respect to the properties which Mr. Bakewell had in view, are equal, if not superior, to any of those of that great master's disciples.

Mr. Young's Report clearly states a frequent correspondence and mixture of the New Leicester and Old Lincolnshire breeds, particularly with respect to those in the hands of Mr. Bourne, of Dalby, &c. The result of all the comparisons and conversations, (for experiments there are none of any

importance) is, that the distinctions of these pretended varieties are made without any material differences; that those animals of the most perfect symmetry are the most valuable; that the largest sorts, called the Lincoln breed, with heavy fleeces, are best adapted for the rich grazing and marsh land; and that the smaller compact ones, called the Leicester, answer best upon inferior pasture land, and manured or artificial grasses.

About thirteen years ago, I spent a week with Mr. Bakewell in London, when he had several meetings with Norfolk sheepmasters, in consequence of a proposed wager and experiment for stocking land on equal terms in Norfolk and in Leicestershire with sheep, the peculiar breeds of the respective counties, in order to discover which were the most profitable. But after much altercation, dining, and copious libations of wine, the scheme was laid aside.

During that week Mr. Bakewell made many admissions (accompanied with declarations) that led to every inference and conclusion I have drawn on this subject. I will

here give a precept which I have ever since treasured up as a part of the *mighty secret* of breeding handsome sheep, imparted to me at a moment when the most reserved are sometimes a little communicative, (viz)
 ‘ When you have got the sort in every other respect to your mind, and want it a little finer in the wool, and smaller in the bone and offals, breed them once or twice, as occasion requires, into the full blood.’

It may hereafter be most seriously lamented, if either the new Leicester or South-Down sorts of sheep should entirely expel the peculiar breed of sheep in Norfolk, or in any other county. Before we proceed to further investigations of the peculiar properties of the several varieties now produced in our island, it is required that we should take time to discover, whether, by selecting and improving each variety to the highest point of perfection, and afterwards judiciously blending the most valuable properties of each together in one and the same animal, we may not carry it to a point of perfection

not yet imagined by even Mr. Bakewell and his disciples.

The following extracts are taken from my publication of 1785.

‘ There is a breed of sheep peculiar to almost every county in England, which being properly mixed together, would be a considerable improvement to each. It admits of no doubt, but that from every flock of sheep, or herd of cattle, a sort might be selected which are, with respect to their shape and wool, superior to the rest: from breeding these together, an improvement might be made; but this would be advancing by very slow steps, when it is in every farmer’s power to procure a bull or ram of an improving sort, in order to work an immediate amendment. This is the surest way to proceed, and far preferable to changing the females. All kinds of stock will degenerate from long usage of breeding them together on the same soil, whether it is good or bad.

‘ This improvement is more likely to be effected by gentlemen of landed property

than private farmers. And whoever shall affect to despise these hints, may be informed, that notwithstanding the Norfolk and Suffolk farmers stand first as the improvers of land to the greatest advantage, by marling and the cultivation of turnips and artificial grasses, they have not yet learnt the most advantageous uses to be made of them. The improvement of the breed of sheep in those counties is wholly neglected, and they are nearly of as bad a sort as those bred on the most barren land; as are also their neat cattle. Their horses are of a better quality, but these are not so profitable as they might be made, as I shall endeavour hereafter to shew. The inclosed part of Norfolk towards Norwich and Yarmouth, as well as most parts of Suffolk, where manured grasses are cultivated, might vie with the county of Leicester, or any other, in the breed of cattle; for where a farmer takes a farm for even a short term of years, if he can improve his stock thirty per cent. it must be considered as so much money gained.

‘ This improvement in the breed of cattle has been attempted with success in two or three counties in England, particularly in the county of Leicester, to the immortal credit of Mr. Bakewell, of Dishley. He carried the improvements on with an enthusiastic spirit and expence, which would have done honour to a man of more exalted station and fortune ; and though he sometimes lost sight of his own interest, there is no doubt but that he has been of infinite service to his country ; and others have been greatly enriched by taking up only the profitable part of his bright example.

‘ It would be a laudable undertaking in gentlemen of landed property, conducing highly to their own advantage, and that of the public, and might be effected without much trouble, where they reside upon their estates, amongst their tenants, to purchase a better sort of bulls and rams ; especially when they keep any quantity of land in hand, and occasionally give the use of them to such of their tenants as cannot afford to

obtain them otherwise. This would set an example to others, who are attached to old customs and bad methods. Wherever turnips and artificial grasses are cultivated in high perfection, there the best cattle may be produced and maintained also.'

'Such people as hold an opinion, that good land is not adapted for breeding cattle and sheep of the best quality, labour under a very great error; but they are extremely right, if they view the subject without my proposed improvements in the breed. With regard to the declining value of stock, it may be asserted with truth, that very few farmers are so attentive as they ought to be to this point; and therefore suffer considerable annual losses. Every farmer ought to have a view towards the reserved value and disposal of each animal bred, or brought up on his farm, beyond the immediate use. And no animal should be kept after it is past the highest state of perfection, but should be converted to such purposes as may be most

profitable to the owner, and serviceable to the community.

‘ The horse should be of such a sort, according to the soil, (though I admit of no very heavy horses in agriculture, nor of the ox by any means, solely for the business of a farm, their motion being slow upon light land, and their carcasses too heavy upon wet or clay land, where treading is greatly injurious) that he may be made up for sale, when seven years old. He is then in the highest perfection for either coach, stage, waggon, or dray; though for the last very heavy horses are preferred. Custom more than necessity has occasioned this preference; for more active horses would go the oftener, and upon the pavements in London would last longer than a heavier breed. The cow should be turned out to be made fat before she becomes too coarse in her bag, or declines in her quantity of milk on account of age. The ewe should be fatted, or sold for that purpose before she loses her teeth. The sow should be fed in proper time, not only

on account of her decrease in value, but because she is generally productive of mischief when she is old, in throwing gates off the hinges, &c. In short, every animal down to the fowl should be drawn off from a farmer's use when at the highest value, and their places supplied with successions of young stock growing up to perfection; and in whatever instances attention is not paid to this plan, a farm is not stocked to the greatest advantage.

‘ The immense difference in a farm for twenty-one years, between a declining stock, and one improving in value, may easily be seen by the two following calculations, which I have made upon horses for that time.

CALCULATION upon a Stock of Horses declining in Value, for a Term of 21 Years.

Dr.

Cr.

£. s. d.

£. s. d.

Ten Horses purchased in at 15l. per Horse, at 3, 4 and 5 years old, but for the greater ease in calculation to take the average, 4 years old, } 150 0 0
Decrease of the value of each horse, after 3 years of the term at 1l. per head, for 8 succeeding years, with } 100 1 10½
interest simple and compound on each sum, }
Purchase of one horse every year for the last 10 years of the term, on account of losses through age and decay, at 15l. with interest simple and compound thereon, } 197 16 0½
Admitting that for the last 10 years of the term, a horse is every year purchased at 4 years old, to supply the place of one dead through age or decay, there will be 10 horses, losing 1l. per head each in the 12th year; 9 losing 1l. per head each in the 13th year; and 8 losing 1l. per head each in the 14th year; 7 losing 1l. per head each in the 15th year; 6 losing 1l. per head each in the 16th year; 5 losing 1l. per head each in the 17th year; 4 losing 1l. per head each in the 18th year; and 3 losing 1l. per head each for the remaining 3 years, with interest simple and compound upon each sum, } 79 11 5¼

Balance against the farmer 377 19 4½

£527 19 4½

£527 19 4½

Calculation upon a Stock of Horses increasing in Value, upon a Farm of the same size for a Term of 21 Years.

Dr.		Cr.	
£. s. d.		£. s. d.	
Twelve horses at 15l. per horse, upon the average of 4 years old; as it is intended to keep an improving stock, it will be necessary to have 2 supernumerary horses, always having 2 colts rising, 3 years old, purchased in every year, and two 7 years old horses making up for sale; but no allowance for the maintenance of the 2 supernumerary horses ought to be made, because a team of young horses do not eat so much, or require so much nourishing food as old horses, besides that their labour will amply compensate for their maintenance by their utility in seed time and other strait times,		Twenty pound per annum for 18 years gained, with interest simple and compound thereon, being the difference between the purchase of 2 colts rising 3 years old, and selling out 2 horses rising seven years old,	
The interest of 30l. per annum, simple and compound, for the whole term, being the cost of two supernumerary horses,		Value of 12 horses at the end of the term, at the improved ages,	
180 0 0 52 15 5½ 355 4 5 £587 19 10½		387 19 10½ 200 0 0 £587 19 10½	
* Balance in favour of the farmer			

* It appears from adding the balances of the foregoing calculations, (which are very moderate) that it would make the sum of 733l. 3s. 9½d. difference upon one and the same Farm for the term of 21 years, between keeping a Stock of Improving and Declining Horses.

It is unnecessary to make a similar computation upon cows, or any other cattle, as the foregoing case may be sufficient to convince every unprejudiced person of the solid advantages arising from an improving stock. No calculation is made or allowed for accidents, because they may happen on either side. The prime cost of the horses on both sides is equal; the improvement made in them consists in their growth only, and gentle usage when young, which the two supernumerary horses permit a farmer to attend to. And if there is a difference in the prime cost of either side, it must be allowed to be in favour of the improving stock; because colts of two years old are purchased at ten or twelve pounds, which, when made up for sale at seven years old, will (if they take a proper growth and figure) make from 25l. to 30l.* And in the other case of working a team out, or keeping a stock of horses decreasing in value, and no more than are absolutely necessary for daily hard work, those

of a greater age and price must be purchased, in order to forward the desired end.

There is a good moulded cart horse in the county of Suffolk, which of late years has been introduced into Norfolk, and may be considered as the best sort of horse employed in agriculture. Many of them have been used in gentlemen's carriages, particularly in those counties. I have known a farmer there sell a pair of those horses out of the plough for sixty guineas. Were it not for the ridiculous practice of cutting their manes and tails off, they would be brought into more use for the carriage, being generally of a fine chesnut colour, good trotters, and remarkably active. Should I ever be so happy as to see the plan of keeping a sort of profitable stock generally adopted, this kind of horse will be improved in the elegance of his figure and size, without losing his other valuable properties, and will be in greater use for gentlemen's carriages.

Considering that horses make a very

material part of our exports to foreign countries, if the sort of horses bred in Yorkshire was to be brought into more general use, especially upon all light or loamy soils, farmers would find their advantage in it. They answer all the purposes of agriculture in that county, and why might not the breed be more common? Objections, no doubt, will be offered to these plans, and many arguments used against them, especially by those who would rather continue to follow their grandfathers' rules. The accidents such valuable horses are liable to will be mentioned amongst others: to which it may be answered, that this improving sort of horses being either bred upon the spot, or purchased by a farmer when young, is easily made gentle; and the prime cost of them is no more, but rather less, than such as are purchased at a greater age, with no other view but to be worked to death. Therefore these will be no more liable to accidents than horses of less value; nor will their loss be

more severely felt, especially when a farmer raises his own stock.

‘ I cannot conclude this head without giving a piece of advice to all graziers, situate in the south and eastern parts of England in particular ; which is, that they should go down into the country where cattle are bred, when they want any to graze, whether it be Scotland or Wales, and thereby they would obtain great advantages. First, because with their ready money they would get the cattle cheaper than the jobbers could buy them on credit, which they usually do. Secondly, because they would have an opportunity of picking the best, instead of taking the refuse of all the fairs and markets in the north and west of England. Jobbers have confessed to me, that they generally sell their worst cattle in the south, for the same money which the best sorts were sold for in the north. A grazier, not seeing a better kind, takes those before him, and picks his number out of one hundred head, which perhaps were the refuse of a thousand. It is astonishing

that farmers suffer so much jobbing upon their stock! They buy of jobbers, and sell to them, whereby a considerable part of their profit is consumed among a set of idle people who live by their losses. Jobbers are supported like gamesters, with this difference, that one of them have the rash and adventurous, and the other the industrious, for their prey.

‘ If it should be argued, in opposition to this plan, that the expences of travelling and droving would eat up the advantages to be derived from buying a few cattle, I see no reason to admit it; but if so, let the neighbouring graziers agree to go down alternately to buy for each other, by which the expences would be no more than to jobbers, on account of numbers, but less, as the cattle would come straight home, not being hawked about the country at an expence, and the reduction of their condition. The same kind of arguments will hold good with respect to a grazier’s going to Smithfield, either to sell, or see his cattle sold.’

More competent experiments in the breeding and feeding of sheep to perfection will probably determine the amateurs to cultivate and improve that sort which will more speedily grow to a larger size *of fat and lean, blended together*, than is produced by the new Leicester or the South-Down; breeders rejecting, in a great degree, the whale-like generation of tallow upon the outside of the carcase.

DISTEMPERS.

APOPLEXY or respe, dropsy or red water. The first of these disorders proceeds principally from putting sheep, particularly young ones, into very luxuriant pastures or cole-seed, by which more blood is generated than the circulation can admit of. The preventive is exercise, with bleeding, or purging at proper intervals.

As the latter disease is produced by the animal being either starved or maintained upon too much watery food, a due supply

of dry food will always prevent, and sometimes cure this disease.

HORSES.

IF Mr. Young had possessed any skill in horse-flesh or horsemanship, he would not have left the Long Sutton breed of horses out of his catalogue, which are allowed by the most competent judges to be by far the best kind of saddle horses in England. His friend, Mr. Pitt, I am told, is very fond of riding horses of this breed, got by Hue and Cry.

‘ Mr. Smith, of South Elkington, like all his neighbours, works oxen for leading manure, corn, and hay.’

Mr. Smith is undoubtedly right ; upon a large farm it is proper to be able to raise an ox team or two for such purposes, but they should not be depended upon as the principal means of carrying on the work of a large arable farm.

‘ In the fens, the black-cart kind is chiefly bred, colt foals are sold off the mares, and

sent into the high parts of Huntingdonshire, Cambridgeshire, Bucks, Bedfordshire, &c. from 10l. to 12l. each ; and colts, rising two years old, from 18l. to 20l. each. In the neighbourhood of Long Sutton there is a breed of horses for the saddle, remarkable for their bone and activity ; sixteen miles an hour is the rate of their trotting, and sixteen stone the accustomed weight they carry in performing such exertions. Of this breed is Mr. Jenkinson's horse, of Park-lane, called Pretender ; Mr. King's, of White-chapel, called Hue and Cry. Mr. Wroot's, of Long Sutton, got Mr. Jenkinson's horse, and also a horse of Mr. Allenby's, of or near Horncastle, called Atlas. The two latter horses trotted, in 1792, from Huntingdon to Cambridge, being sixteen miles, in an hour, each carrying sixteen stone, for a considerable wager. I have rode Mr. Wroot's horse : he possesses uncommon activity in his trotting, and yet gallops in a superior manner. Other parts of the county are not deserving particular attention, as to the pro-

duction of this animal. It is a practice with many occupiers of grass land, to purchase bay three year old colts, at the Yorkshire fairs, to keep them a year, or till they are four years old, although from the custom of drawing the corner teeth, by which means the last teeth come up a year before they otherwise would appear, to a common observer they appear to be five years old. They are made fat, nicked, and sold, at Horncastle fair, to the London dealers, at the customary prices, from 35*l.* to 40*l.* each. They are then taken to London, where they undergo the exercise of the break, or carriage, for a month or six weeks, and are sold from seventy to eighty guineas each, for gentlemens' carriages.

‘Horses, thus young, being driven hard about the pavement in London, and kept in hot stables, soon give way in their feet, and they become foundered and useless; consequently a much greater number of these animals is bred upon our land than would otherwise be necessary, if they were seasoned

and used for the purposes of agriculture till they are six or seven years old ; and this circumstance must tend to delay the production of beef, mutton, and wool, as far as it goes. Besides which disadvantage, the horse is an impoverisher of the land he depastures upon, in the same ratio that sheep are the contrary. All horses ought to be kept in confined situations, and fed upon tares, lucern, &c. &c. in summer.'

SWINE.

It is wonderful that Mr. Young has not recommended to his hospitable Lincolnshire friends to adopt *the Suffolk breed of hogs*, as they are remarkable thrivers upon '*hot potatoes* !

' These animals (alluding to the Lincolnshire breed) are generally of a coarse, bony, long-legged, flat-sided sort, and much inferior, in point of make and shape, to the Berkshire, Wiltshire, and Hampshire kinds, not possessing the aptitude to become fat, which ought to be attended to, in the pro-

duction of this and every other animal for the use of man.'

'I recommend the cultivation of a few acres with carrots, parsnips, and potatoes, upon every farm annually, as a means of feeding cattle and swine to great advantage. The latter animals are more valuable to a farmer than any other, for the following reasons: 1st. They yield a greater profit in a shorter time than any other animal; 2d. they are not subject to the losses and casualties which other animals are subject to; 3d. their manure is more valuable than that of any other animal.

'I do not mean to be understood, that a farm ought to be wholly stocked with swine, but that a considerable number ought to be kept by every farmer; that is to say, upon a farm of 200l. per annum, consisting of two-thirds under the plough, one hundred head of swine might be annually produced, of the average value of forty shillings, kept or folded upon tares and clover by day, and brought into a fold-yard by night.'

This is the most profitable animal known in the creation; it will feed and thrive upon every kind of food which any other animal can be subsisted upon, and of the most refuse kinds. It is subject to but few maladies, and will attain its full growth in twelve months. There are various breeds and mixtures of breeds in these kingdoms, and there are some sorts which may be selected by good judges in almost every district, which are more thrifty than others, and grow to the greatest size in the shortest period, and with a less comparative quantity of food. These undoubtedly ought, in all cases, to be preferred.

RABBITS.

It is well known that the most considerable parts of the wolds were formerly rabbit-warrens.

It is a fact equally known by the proprietors of rabbit-warrens, that during the American war the occupiers of property of that de-

scription gained more than the farmers and graziers. The only remark in Mr. Young's Report which, in my opinion, has the appearance of coming from a practical man, is that at the bottom of page 390, where he observes, 'A circumstance which makes any account complex is, that upon many warrens here, as well as elsewhere, they take in annually a certain portion of the warren to break up by paring and burning if the turf admits it.'

This remark admits the full force of the facts contained in my Report before quoted. The warren is 'pared and burnt,' and afterwards 'ploughed out,' as often as any part of it will produce a coarse turf likely to afford any ashes.

Afterwards the land, thus totally exhausted for every purpose of cultivation, is considered as good enough for rabbits; which are a stock not altogether visible upon the ground, and from a variety of considerations, any calculation upon the profits of a warren must chiefly depend upon the report of an occu-

pier, whose most valuable productions are obscurely sent to a foreign market.

POULTRY.

MR. YOUNG has here omitted to bring into his account the frequent loss of the whole stock of geese, as often as the commons are in a very wet state in summer, immediately after they were plucked, which generally happens, on an average, once in three years.

SECT. VII.—FISH.

It is strange that the fertile enterprizing genius of Mr. Young should overlook the great advantage this county might derive from the maintenance of many of its inhabitants, and the amelioration of the condition of the remainder of them, by the establishment of a fishery on the adjoining ocean. They might thus have an unfailing resource against the miseries of dearth or famine. His attention would surely have been better employed upon a subject of this magnitude

and importance than in detailing the pleasant, though uninteresting, transactions of a fishing party on the river Witham.

To conclude this subject, if proper use had been made of the following hint contained in my Report, p. 45, an improvement upon it might have been highly beneficial, not only to the county of Lincoln but to a much larger district, at all times, and especially on the approach of scarcity :

‘ If more attention in this county were paid to the excellent fish the neighbouring sea coast affords, the poor, as well as the public, might be greatly benefited ; but, at present, there are very few fishermen on the coast.’

The simple fact is, that at the time I made my survey, there was but one fisherman in an extent of fifty miles along the coast, between Great Grimsby and Wainfleet. The man had a wife and family of children ; his name was Lottery. He erected a miserable cottage by the side of the sea bank near Anderby. But the Reverend Mr. W. and other

active Commissioners of Sewers, obliged him to take down his cottage, under an apprehension of his injuring the sea bank. So, after shifting his cottage and his family, from time to time, from place to place, he was tired out; and I was afterwards informed that he was constrained to abandon his employment as a fisherman. The price for which he then sold live Sheeder scate was one halfpenny per pound. I myself frequently bought it of him at that price.

RURAL ECONOMY.

SECT. I.—LABOUR.

THE several remarks upon this head being summed up in p. 402, it only remains for me to make a remark or two upon the general result, and just touch on the MS. of the Board introduced into this section.

I take the very high price for reaping per acre at Long Sutton at nineteen shillings, and the opposite case of seven shillings and

sixpence per acre paid for the same kind of labour in the Isle of Axholme, for my data.

It would be foreign from the point to suppose that Mr. Young meant to be understood that the acres differed in size, or that the crops should not be similar. It has already been stated that the land in the Isle of Axholme is, for the most part, in the hands of small proprietors and occupiers, where the labour is generally performed by themselves and families. This should operate as a reason why task-work is dearer* in that part of the county than at Long Sutton, (the common market for hired labour) where the occupations are larger, and where the farmers are too affluent or indolent, or too much engrossed by other concerns, to perform any labour themselves. Indeed if it were otherwise, they could only perform a small portion of it, on account of the great quantity.

* Because fewer foreign trampers resort to Axholme, and from whence their own loose hands would be rather supposed to emigrate for the time of harvest.

The MS. of the Board suggests the propriety of the interference of the Legislature in this important point.

I will not vouch for the wisdom of such application of its powers, whilst a little more foresight and management of the proprietors and occupiers in particular districts would remedy the evil complained of, and reduce the price of labour to an equal ratio with that of the respective current prices of provisions in the several parts of the county, and of which there is no great variation.

I have several times been at Long-Sutton, Holbeach, March, and various other towns in the marshes and fens, in the time of harvest; and it is not the practice with the farmers in this county, as in Norfolk and some others, to engage husbandmen, artificers, &c. in the capacity of what is called *Month's Men*, and to board them in their houses during the harvest, which generally lasts a month, and for which they are, on an average, paid two pound twelve shillings and sixpence. Such men are hired frequently several months

before the harvest commences, and I have often known sober, industrious *month's men* employed during that season for many successive years upon the same farm.

A farmer who conducts his business properly, and duly considers the probable number of hands he shall want, selects and provides them a considerable time before the business commences, and makes every proper provision for their lodging and maintenance. Watching the approach of harvest, he directs them to assemble on a certain day, and then his work begins. Each man performs his duty in his appointed station; for the whole are arranged in such a manner as their respective qualifications and the state of the weather render most expedient.

In the morning early he calls them to mow barley; at ten o'clock, or when the dew is off, to reap the wheat, &c. and so in rotation through the whole process of mowing, reaping, carrying, housing, stacking, and thatching.

In populous countries the month's men are selected from among the artificers, labourers, and tradesmen of the neighbourhood, and the nearest manufacturing towns. It has been a common practice for Irishmen to come over to hay and harvest in this kingdom.

The upper parts of Cambridgeshire and Huntingdonshire (being chiefly open fields and corn countries) do not afford a sufficient number of resident men of any description to get in the harvest.

To Huntingdon, Saint Ives, Cambridge, and many other markets, the farmers resort to hire month's men, some weeks before the beginning of harvest; for at these towns multitudes assemble to let themselves for this purpose. The bargains are soon struck, and the whole business settled, each farmer hiring as many as he apprehends he shall want. I have known certain men, stocking-manufacturers from Leicester, who have harvested for seven successive years with a Cambridgeshire farmer.

This foresight and anticipation must be acknowledged to be judicious. Farmers would doubtless derive advantage from them if they were extended to other concerns; those of the marsh and fen are generally not so provided.

I have on a fine morning been obliged to arise at the Inn, at Long Sutton, and march long before my avocations required it, on account of the assemblies of harvest-men under my windows, talking as many different dialects as the builders of Babel, Irish, Scotch, and Welch, upwards of fifty in a body, bargaining with farmers for the work of that day.

The circumstance, that the corn was shaking out and falling in the field without one hand employed to reap it, was well known to both parties. The labourers, therefore, availed themselves of the other's necessities, requiring, and actually receiving half-a-guinea and upwards per day wages.

Persons disposed to defend their misconduct and want of forecast will assign any

flimsy excuse as a reason for such indolence and mismanagement ; but reasons of this kind can have no weight with a man who knows a better mode of proceeding ; one who has seen the low country farmers, on the prospect of a fine day, riding to such places as Long Sutton, March, &c. &c. to obtain harvest-men, and who, if he had not known the motive of their hurry, would have supposed they were pursued by Bonaparte. Nothing can reduce and regulate the price of labour so decidedly as the providing proper habitations for the necessary labourers. This proves the benefit of adopting a plan of forecast similar to that which I have alluded to. The labourers will thus maintain themselves more cheaply, and the price of provisions will be almost the sure criterion of the price of labour.

It may justly be expected by the farmers, that labourers and harvest-men will take advantage of their precarious situation, and exact the utmost farthing they can obtain

from him who shews no regard for their permanent interest, and employs them only in the moment of need.

SECT. II.—PROVISIONS.

THE price of provisions, as stated by Mr. Young, cannot be the average of the respective places mentioned, for a year, much less for the county in general.

The price of mutton is not mentioned for Gainsborough—‘ Salmon there one shilling per pound; butter at Folkingham tenpence per pound; at Louth ninepence, &c. &c.; coals at Haxey sixteen shillings per ton, at Gainsborough seventeen shillings,’ &c. &c. These and the like statements do not prove any thing, because the quality and freight, land and water carriage, vary so much that it is impossible to fix any data in these respects. It may be truly said of the county of Lincoln, that provisions are as cheap there as in any other, the centre of which is one hundred and thirty miles from London.

Trent salmon is sold at Gainsborough, at

its arrival, and when most in season, at two shillings per pound, when the inhabitants consider it a great luxury.

I have been well informed that salmon at a lower price is frequently sent down from London to Newark, at this time, for sale to the people of the country as Trent fish. It is also reported to be frequently bought by travellers, and carried back by them to London as a treat to their friends. The price of Trent salmon, when it is in high season, is beyond the purchase of the middling class of people.

If the current price of butter 'at Gainsborough is tenpence per pound,' how the poor there can obtain it at eightpence halfpenny, is a paradox which Mr. Young can only explain, because the poor generally purchase all their necessaries at short weight, and consequently at a higher rate than the more affluent.

From the fertile mind of Mr. Young the public had a right to expect some plan, or at least some recommendation to the enter-

prizing part of the inhabitants of the eastern coast of this county, that extends at least an hundred miles, to avail themselves of the means of catching the fish, of which a variety of species visit it at different seasons. *No rent is paid for the sea.* It affords a constant supply of stock which may always be had for the trouble of taking. With due industry and attention fish might be generally had in the centre of the county at a price fluctuating between one penny and twopence per pound.

There is a successful manufactory of sack-cloth at Epworth, which has not been mentioned by Mr. Young.

Surely that gentleman ought to have given some account of the cause of the failure of the wool-combing instrument at Raithby, called ‘Big Ben,’ or why mention it, *or does its machinery (I will not say economy) bear too strong a similarity to that of Retford?*

SECT. IV.—POOR.

MR. YOUNG has treated pretty much at large on this head; and previous to any observation on his remarks, I will venture to state some short extracts from my Report.

‘ To provide comfortable habitations for the necessary labourers on each farm, with a convenient garden, and depasturage in summer, and winter food for a cow to each cottage, at a moderate rent, or to provide them with milk for their family, will be a means of attaching them to a farmer’s interest, in proportion as they regard their own, and of promoting population in proportion as their sustenance is rendered more abundant.’

‘ To build or provide a cottage, with a suitable spot of garden-land, and the means of maintaining a cow both in summer and winter, for each necessary labourer employed upon an estate, may be an advisable measure; and to place such cottages near, or adjacent to each other, will be a saving in

point of expence, and the means of making the conduct of each individual known to his neighbours; from which circumstance a degree of caution, and even forbearance, may be produced.'

The above recited passages prove that this subject was not left unnoticed by me; and although the particular instances of management mentioned by Mr. Young do honour to the parties of whom they are related, yet these instances comprehend but a small portion of the county of Lincoln.

I have frequently found fields, which were set out for the cottagers on estates inclosed upwards of one hundred years ago, wholly abandoned, and returned again into the hands of the principal proprietors.

The plan of assigning to each cottager land for the pasture of two cows, and a follower in summer, and land for mowing hay as a provision for them in winter, at an easy rent, seems, at first sight, a practice consonant with the dictates of humanity, and

unexceptionably laudable. And when from experience we find that it does not generally succeed in producing comfort and happiness to the lower class of persons employed in husbandry, the mind of the promoter sickens at the unsuccessful exercise of its own benevolence.

The cottager, thus provided with pasturage for a fresh milch cow in summer, must also extend his forecast to the acquisition of the same conveniency in winter, at which season this comfort is most wanted by his family; and he cannot keep up his stock properly, unless he have a young one always coming in. For if he be obliged to sell off his cows when they are stale, and to purchase others which are fresh, and if a reasonable rent is paid for the land, the produce of the cows will not compensate for the waste of capital, and a positive annual loss must be the result. Where no rent is paid by the cottagers for such an indulgence, it would probably be found that the sacrifice is more than it would cost the

land-owner to supply the cottagers, at a low price, with all the articles of accommodation they derive from keeping cows.

Whilst the cottager holds land in independent occupancy, he must mow hay for the support of his cows in winter: even if the crop should prove deficient or defective from bad seasons, his stock must subsist upon it, however small the crop may be, without the least profit; a disadvantage which does not frequently befall the large occupier, even in the severest seasons. From the extent or magnitude of his possession, and the length of time he must necessarily be employed in getting in his harvest, he is furnished with hay of different qualities. So that which is inferior goes, without much loss, to maintain store or young stock, whilst his milch cows are supported upon hay of superior excellence.

It is the waste of capital in selling stale milch cows off and buying in fresh ones, and the frequent reduced quality of the hay, that bear so hard upon the small occupier.

The great rise in the price of hogs and poultry has, in Great Britain, been frequently imputed to the diminution of the number of cottagers and other small occupiers of land: an event which has, in every part of Europe, been the immediate forerunner of improvement and better cultivation, but which, at the same time, may have contributed to raise the price of those articles, both somewhat sooner and somewhat faster than it would otherwise have risen. As the poorest family can often maintain a cat or a dog, without any expence, so the poorest occupiers of land can commonly maintain a few poultry, or a sow and a few pigs, at very little. The small offals of their own table, their whey, skimmed milk and butter-milk, supply those animals with a part of their food; and they find the rest in the neighbouring fields, without doing sensible damage to any body. By diminishing the number of those small occupiers, therefore, the quantity of this sort of provisions, which is thus produced at very little

or no expence, must certainly have been a good deal diminished; and their price must consequently have been gradually advanced. Sooner or later, however, in the progress of improvement, it must at any rate have risen to the utmost height of which it is capable of rising, or to the price which pays the labour and expence of cultivating the land which furnishes them with food, as well as these are paid upon the greater part of other cultivated land.'

I will not avail myself of the particular instances of Hackthorne and Sudbrook, where the cottage system 'does not succeed well.' At the same time, with regard to Hackthorne, the property of Mr. Cracroft,*

* This estate descended to its very honourable possessor, Mr. Cracroft, upon the demise of his elder brother about twelve years ago. When he first met his tenants, he informed them that he would not make any increase of their rents, &c. for seven years; at the end of that period he might, probably, have his estate examined, and those tenants who should then be found to have been the best husbandmen, he would pay most attention to. I had the honour

I am well acquainted with, having in 1794, valued and let it.

The greatest part of that parish is light and arable, and not adapted for pasture.

to be employed to value this estate. When I arrived at Hackthorne, although the weather was extremely unfavourable for proceeding (being one of the most inclement days of the winter) Mr. C. whose anxiety and activity were both excited, determined to send for his principal tenant, to take a ride upon that tenant's farm. We had only proceeded upon part of it, being a light, loamy, sandy soil, before Mr. Cracroft called upon me for an opinion. I began a conversation with the tenant, and reprobated the slovenly impoverished condition of the land, it being a continued *mat* of *tritium-repens*, or what is commonly called couch or twitch grass. To which the tenant replied, 'Is that all you know about the matter? The land is the better for it; it *tiffens* it, and binds it together.' To which I replied, 'Do not you think it would have been better kept together, had it been laid down clean and in good condition with ray grass, trefoil? &c.' He replied, 'No.' Mr. C. immediately received my opinion in the field—that his tenant was either going to *break*, or had provided another situation. 'Then,' replied Mr. C. 'the latter is the case: he certainly is a man of good property, and carries on a large malting trade at Lincoln.' He made no offer to retake the farm, and retired to exercise his trade.

I have omitted to mention, in its proper place, that Mr. Young has been very particular and minute in describing new erected buildings in some parts of his report, even to the mention of a farmer's *drawing-room*; but in the case

Upon referring to my papers, I find only an account of two cottagers here, Thomas Chaplin and John Fenwick.

Glentworth affords no instance whatever, as mentioned by Mr. Young, of cottagers' mismanaging ploughed land; nor has the Earl of Scarborough any such practice upon his estate, nor any arable land committed to the management of cottagers.

Mr. Young has not sufficiently delved into what he calls the 'cottage system' in Lincolnshire. He constantly plays upon the surfaces of things, and mistakes shadows for substances.

Throughout the marshes in Lincolnshire, and most particularly those districts which

of the elegant mansion erected for Mr. Cracroft, in this place, by Mr. James Lewis, architect, of Powis-Place, London, not a word is said; altho' a circumstance attended this business which ought not only to be recorded, but to be made as public as possible. Mr. Lewis, as I have been informed, (*as is his general practice*) delivered to Mr. Cracroft, before he proceeded upon the work, a very particular estimate of expence, which, in the winding up, was found that he had not exceeded one shilling.

are appropriated to pasture and grazing in various situations, land of this kind is chiefly in the hands of wold-men, who hold it as a necessary appendage to large tillage farms ; they are, on this account, obliged to retain overlookers, bailiffs, or shepherds upon it, to take care of their property ; men in whom a considerable trust is necessarily reposed, and who must support some degree of authority in their respective situations. It is, therefore, to be expected, that such men will stipulate for, and even prescribe the domestic comforts of keeping a cow or two, and a few pigs, &c. in their particular situations, for the maintenance of their families.

The like circumstances frequently occur upon the wolds, when the engrossers of large farms must necessarily retain shepherds and overlookers in particular situations. Therefore, giving every degree of credit to the benevolent motives of all the noble and respectable personages and authorities instanced by Mr. Young in forwarding the 'cottage system,'

I submit to the judgment of the reader whether the circumstances I have mentioned may not rather lead us to condemn than to commend a practice which has for its object the extending of farms already too large, by those who have not (as in Norfolk) had for their main objects the embarking considerable capitals in the improvement of extensive tracts of heretofore barren and unprofitable land. Their end was to be gained by means of paring, burning, skimming over, reducing the condition, and ultimately ‘ploughing out’ large tracts of such land, in the hope of immediate profit.

In the supposed case of arable land in the hands of cottagers at Glentworth, Mr. Young condemned the practice, not only in that instance but generally; but at Marston he commends it, and there he finds meadow land that is sometimes ploughed. ‘As it does not always suit to remain in meadow, they plough and lay it down again, and their crops are good, and pay them well.’

I must confess that I never saw meadow land, such as is here described, that under the best husbandry can be improved by being converted into arable, and again to meadow. Little reason have we then to expect to find it so, under the management of mere cottagers !

How frequently has Mr. Young mentioned in his report the opinions of practical men, that ‘land in Lincolnshire was generally inclined to grass ;’ and ‘that the value of pasture and meadow land increased in proportion to the length of time it was continued in that state !’

I wish from my soul I could find good reasons for generally recommending what Mr. Young calls the ‘cottage system’ in Lincolnshire, in *its greatest extent*, as a measure to go hand in hand with the due cultivation and improvement of the soil, and ameliorating the condition of the labourer.

In addition to the adventitious circumstances I have already pointed out as likely

to befall the cottager who is an occupier of land, let us take a view of him in his domestic condition; let us suppose him a married man, with a breeding wife. The woman is sufficiently employed in attending to her children, and in other domestic occupations. It therefore follows, that whatever relates to the cow must be performed by himself, before his daily labour begins and after it ends.

His garden and potatoe ground must also be cultivated at such intervals of daily labour.

Now, let any man acquainted with human nature, ask himself, whether, after such a man has toiled in the heat of day, and laboured hard from morning to evening, nature is not too much exhausted, even if he is well supported in point of food, to allow him to open a fresh account of labour on his own soil?

We cannot hope that such a man shall procure any hired assistance in any way,

because a very little of that will, at any time, throw him on the parish.

It appears to me that a cottager has no chance to succeed as a renter of land, except he has an industrious wife who does not breed children, at least till after his children are sufficiently grown up, and sent into the world; for a labourer acquires no profit by retaining his children at home after he can put them out to service.

The cottage system, carried a little farther than we have at present brought it into contemplation, would tend to make every man a renter of as much land as would support his family, and would send things back to their pristine state, described, or rather imagined by the poet:

‘ There was a time e’er England’s griefs began,
‘ When every rood of ground maintain’d its man.’

This circumstanced, we may in vain seek for the means of cultivating our forests and other waste lands, and of bringing about a general improvement in the country.

The 'cottage system' must be so far limited as not to destroy the labourer's energy when working for the farmer, or by any means make him *independent* of that farmer for his daily support.

Mr. Young, in speaking of the management of Sir John Sheffield's estate, p. 412, says, 'Let me however note, that, in the great extent of this estate, there is but one public house; a remarkable instance, that speaks strongly upon a point of infinite importance to the national manners and prosperity.' Are we to receive this remark as a libel upon the promoters of the daily encreasing excise laws, or as one of his agreeable *jeu d'esprits*?

A celebrated author has said, 'It is not the multitude of alehouses, to give the most suspicious example, that occasions a general disposition to drunkenness amongst the common people; but that disposition, arising from other causes, necessarily gives employment to a multitude of alehouses.'

'It is a losing trade, it is said, which the

workman carries on with the alehouse ; and the trade which a manufacturing nation would naturally carry on with a wine country may be considered as a trade of the same nature. I answer, that the trade with the alehouse is not necessarily a losing trade. In its own nature it is just as advantageous as any other, though, perhaps, somewhat more liable to be abused. The employment of a brewer, and even that of a retailer of fermented liquors, are as necessary divisions of labour as any other. It will be generally more advantageous for the workman to buy of the brewer the quantity he has occasion for, than to brew it himself ; and if he is a poor workman, it will generally be more advantageous for him to buy it by little and little of the retailer than in a large quantity of the brewer. He may, no doubt, buy too much of either, as he may of any other dealers in his neighbourhood ; of the butcher, if he is a glutton ; or of the draper, if he affects to be a beau among his companions. It is advantageous to the great body of workmen, not-

withstanding, that all these trades should be free, though this freedom may be abused in all of them, and is more likely to be so perhaps in some than in others. Though individuals, besides, may sometimes ruin their fortunes by an excessive consumption of fermented liquors, there seems to be no risk that a whole nation should do so; though in every country there are many people who spend upon such liquors more than they can afford, there are always many more who spend less. It deserves to be remarked, too, that if we consult experience, the cheapness of wine seems to be a cause, not of drunkenness, but of sobriety. The inhabitants of the wine countries are generally the soberest people in Europe; witness the Spaniards, the Italians, and the inhabitants of the southern provinces of France. People are seldom guilty of excess in what is their daily fare. Nobody affects the character of liberality and good fellowship by being profuse of a liquor which is as cheap as small beer; on the contrary, in the countries which, either

from excessive heat or cold, produce no grapes, and where wine consequently is dear and a rarity, drunkenness is a common vice, as among the northern nations, and all those who live between the tropics ; the Negroes, for example, who live on the coast of Guinea. When a French regiment comes from some of the northern provinces of France, where wine is somewhat dear, to be quartered in the southern, where it is very cheap, the soldiers, I have frequently heard it observed, are at first debauched by the cheapness and novelty of good wine, but after a few months residence the greater part of them become as sober as the rest of the inhabitants. Were the duties upon foreign wines, and the excises upon malt, beer, and ale to be taken away all at once, it might in the same manner occasion in Great Britain a pretty general and temporary drunkenness among the middling and inferior ranks of people, which would probably be soon followed by a permanent and almost universal sobriety. At present drunkenness is by no means the vice

of people of fashion, or of those who can easily afford the most expensive liquors. A gentleman drunk with ale has scarce ever been seen among us. The restraints upon the wine trade in Great Britain, besides, do not so much seem calculated to hinder the people from going, if I may say so, to the alehouse as from going where they can buy the best and cheapest liquor.

Having pursued this subject so far as to be understood to entertain an unfavourable opinion of the general adoption of the cottage system in Lincolnshire, it may be expected from some of the readers that I should give an opinion upon a mode of providing for the comfort of the poor, which is less exceptionable, or more likely to promote their happiness and welfare.

The mode I shall recommend is briefly as follows: Let each cottager be provided with a comfortable cottage, and a garden, wherein he may raise potatoes and other esculent roots and vegetables for himself and family;

half an acre of good land is generally sufficient, and as much as he can cultivate. Let him have these at a rent of twenty-six shillings per annum ; a plan I have generally pursued where the direction of this matter has been left to myself ; because the laying up an even piece of money (sixpence per week) is soon discovered to be necessary, and insures punctuality. Where cottages are to be erected, I have generally recommended that two or more should be connected, as a means of preventing secret movements, by making the general conduct of each individual known to his neighbour,—a good expedient for preventing abuses.

The conduct of the West India planter towards his slaves, lately so much commented upon, in many respects exceeds in kindness and humanity that which is generally practised by the British farmer towards the labouring poor. The former has a property in his slave, and is consequently interested in keeping him not only alive, but in good condition, and in his full strength, that he

may be enabled to perform his daily labour.

The farmer generally bargains to pay his labourer the least possible sum he can contract for. Moreover, in the moment of sickness or distress he is left to resort to the parish for relief, where he is again subjected to the same kind of hard bargain; even in the expenditure of what he obtains he has other difficulties to encounter, which I shall endeavour to explain.

It is a lamentable circumstance, that under the general complaint of the increase and accumulation of the funds for the maintenance of the poor, which are frequently raised with difficulty, and often paid with grumbling and reluctance, so few of those, whose duty and interest it is to attend to their economical expenditure, bestow the smallest thought on the subject till they are called upon again. Probably, in their minds, it is confounded with their general ideas of taxes.

But with regard to the rates for the maintenance of the poor, it is quite different. We

are interested in the economical expenditure of every shilling of that fund until we be again called upon to raise another.

The pauper receives hard money of the overseer, and lays it out for himself in the best manner he can. This observation leads me to consider under what disadvantage these supplies are generally expended. Even the cottager who occupies small portions of land is obliged to deal in a similar way, and I mean to include his interest within my observations.

The practice of men-midwives has, generally speaking, been a means of reducing the condition of the lower orders. Those gentlemen are generally *apothecaries too*. And it has been of late years a practice with the poor to call in medical assistance upon occasions which formerly were considered as slight, and were commonly removed by a little buttered ale, a hot brick, a flannel waistcoat, or by the application of some of 'Doctor Last's' remedies.

Gentlemen of the profession of physic

must be paid for their skill, labour, and drugs, when they are called in ; and the object I have in view is, that they should be employed less frequently, and better and more certainly paid.

Let a proper woman in every parish be instructed in the art of midwifery, and in the proper methods of treating lying-in women ; and to her let the poor generally resort. Let a surgeon and apothecary be agreed upon at a *fair and liberal* salary for his attendance by the year, in difficult cases, according to the number of paupers ; and let the cottagers, or other persons who think proper, raise by subscription an additional sum, by way of salary for attending their families during sickness, or in cases that require the art of surgery. Thus we should frequently have disease prevented, or nipped in the bud.

The consequences of a sick family to a cottager, in the present age, is but too often the sale of his cow to pay the Doctor's bill. The cottager and pauper feel alike the dis-

advantage of laying out their money at a village shop, as many of the articles they purchase have from custom and example, more than from their natural wants, become necessities of life. There the commodities are worse in quality, sometimes deficient in quantity (as coarse heavy paper is generally weighed with the little modicums) and higher in price than they might be purchased at the best hand by thirty per cent. In the article of cloathing, every advantage is taken of the lowest class of people.

The butcher gains the offal, being the skin, tallow, &c. or what he calls a fifth quarter, and is twenty per cent. upon his whole capital. Experienced in the weight of live animals, from so frequently weighing them dead, it is reasonable to suppose that he gains five per cent. of the grazier or salesman, from his superior judgment ; and as the price of butcher's meat is not regulated by any standard, and is always varying, he generally gains ten per cent. upon that head. Allowing five per cent. for

losses, the gain will be thirty per cent. on the whole capital, which admits of a weekly return. This is an object of the most serious consideration, when considered as a means of enhancing the price of provisions, and calls aloud for public redress.

I therefore recommend, that in every large parish there should be established public shops for vending grocery, drapery, &c. and made-up cloaths; but, first, *a public slaughter-house and shop for distributing butcher's meat to the lower class weekly*, and a public oven for baking bread for all those who chuse to send to it twice a week. All this might be easily carried into effect by a man hired for the purpose, under the direction, inspection, and controul of the minister of the parish, and the overseer or overseers of the poor for the time being. The articles of consumption might be easily purchased to great advantage, for ready money, at the first wholesale warehouse, and the distribution might be made weekly.

In many situations, a farmer, tradesman,

or mechanic of respectability, who has retired from business, might be procured, who would find the superintendence of this department a pleasant, because a benevolent employment.

I have seen a great advantage enjoyed by a country village, where the clergyman dispensed advice, medicine, and assistance. Surely this practice might be extended, and many of the clerical profession might derive no slight pleasure from the consciousness of being so well employed !

Lastly. ‘Thou shalt not muzzle the mouth of the ox that treadeth out the corn.’

It is a practice with many farmers I am acquainted with, to supply their regular labourers with bread and corn, at a moderate price per bushel, weekly ; a far better practice for the farmer than raising the price of labour, which cannot be again easily lowered with a change of circumstances, and more advantageous for a labourer, who would himself expend an increase of wages to less advantage.

In the present year, 1800, the farmers allow the labourers good wheat at seven shillings per bushel, as well as milk for their families, at a moderate price, daily. Others keep a cow for each labourer, at a moderate price, for agistment. And as such procedures are a means of keeping down the poor rates, it is a matter of the utmost economy to pursue this plan. It maintains the spirit of the labourer unbroken, and keeps up the laudable pride of supporting a family without going to the parish for relief. Pride of this sort is a fence not only against a pusillanimity of spirit, but against that deprivation of mind and extinction of virtuous principles that so often lead a man, step by step, to acts of the greatest atrocity.

In the concluding part of this section Mr. Young seems to have forgot what he advanced in the first page of his introduction to the Report, that the investigations of the Board 'carried nothing of taxation in the result.'

He now speaks of the 'energy of the Board being brought into play, to discover the right means of Legislative interference;' 'and it will find itself in a position respectable, because unquestionably useful between administration, on one hand, and the people, on the other;' 'an office of intelligence gleaned from the whole kingdom, and of ready application to many great measures of political economy.'

If there is nothing of taxation meant in the foregoing expressions, it remains for Mr. Young to explain what they do mean.

SECTION V.—POPULATION.

THE few and partial instances adduced by Mr. Young upon this head do not prove any thing. If he had procured from Colonel Loft an account of the men he had enlisted in this county since the commencement of the present war, it would have thrown more light on the subject of the depopulation of the county, and more strongly proved the diminution of the rising generation of hus-

bandmen, and in a great degree the consequent high price of labour, than all the reports of the Reverend Mr. Knight, Mr. Shinglar, and Mr. Allington.

It is for the fertile mind of Mr. Young to calculate from the particular instance of the improvement of one solitary parish (Swinhop) the immense resources of the kingdom at large; and that proportionably to its improvement England could now bear 'a thousand millions of debt.'

CHAP. XVI.

OBSTACLES.

THE mice in Deeping Fen having all been drowned by the inundation occasioned by the breach of the bank of the Welland, Mr. Graves has no occasion either for the traps or the cheese to bait them with, which Mr. Young undertook to send down.

'The height of tythes' in the hundred of

Skirbeck, is here mentioned as an obstacle to improved agriculture, and the breaking up of ancient pasture land.

Mr. Young has not told us that in this district the impropriator's or vicar's tythe is *ad libitum*, or that any of the lands pay more than one-tenth of the produce; and if that is the case, why grumble at it? Where is the hardship? The right to collect them is not of recent origin. The lands have descended, and have been bought and sold for a long series of years, with this incumbrance upon them, and have not gained any material improvement from personal property fixed upon them; therefore the parties in possession can receive no hardship from the exaction of one-tenth of the produce as tythes. Nor have the lands, recently exonerated from tythes, derived very great advantages from that circumstance; for the tythe-owners received an equivalent in land for the commutation.

It may fairly be presumed that the land owners are not so deaf to their own interest

as to delay it in nine parts of the improvement, to deprive the owner of the tenth. I am rather apprehensive, that the owners of good land in this district are not delighted with the smell of paring and burning, and the consequences which are universally resulting from the practice in this county.

Similar reasons probably operate upon the minds of the land owners 'about Reevesby,' &c.

The management of the land owners in that district has been very extraordinary, in suffering it to remain in a state of ancient pasture, when, if broken up, it would be best adapted to the production of turnips and seeds.

Nay, Mr. Young insinuates by his remarks, that such pasture land is not adapted to the growth of turnips and seeds, 'it having been formerly mowed for winter food;' because land capable of being constantly and profitably mowed for winter food, is too tenacious and heavy for profitable occupation

under a system of turnip and seed husbandry.

I should rather have said that the greatest obstacle to improve agriculture in Lincolnshire is the not sufficiently restraining paring and burning, and ‘ploughing the land out,’ and not introducing those systems of husbandry which have been tried and found to answer upon similar soils in the improved counties; and omitting to compel the tenantry to drain after the most approved examples.

A lease without due attention to the enforcement of its several clauses, operates rather as an evil than the means of improvement.

SECT. II.—WEIGHTS AND MEASURES.

THE observations under this section are professedly those of J. Cartwright, Esq. whom I presume to be the same person Mr. Young has frequently, in his report, called the ‘Major,’ a gentleman who resides at

Brothertoft, and who is so largely concerned in the growth and manufactory of woad.

This gentleman, in some of his publications, appears to be the avowed champion of the liberty of the subject, and the supporter of the rights of man. He is here introduced in a new character ; and his doctrine brought forward upon this occasion is better adapted to the meridian of Constantinople than that of this country.

He appears to recommend the establishment of the power of the Country Magistrates on principles as arbitrary as those that regulate the conduct of the officers of Justice in Turkey ; and that the Court of Quarter Sessions should be a registry of edicts that are to supersede the law of the land.

The Major first proposes a mode of proceeding, which, in practice, will amount to a bounty upon perjury. And I hope this gentleman will explain to the public where the power is to reside which shall exempt the maker of the proposed affidavit from all pa-

rochial assessments, as a reward for having made it; and shall lay double taxes upon the houses and windows of those who shall refuse to obey the arbitrary mandates of collectors of taxes.

If an adherence to the standard weights and measures of the land, under the authority of the Legislature, cannot be enforced in a better way than that recommended by Major Cartwright, I shall still be disinclined to recommend to the county of Lincoln to commit the regulation of it into the hands which held the balance of interest between the parishes of *Brothertoft* and *Wyberton*.

SECT. III.—RELIGION.

Every man must agree with Mr. Young as to the necessity of a due attention being paid to religious worship. Religion heightens the joys of prosperity, and affords the surest consolation to those who labour under any affliction either of mind or body. Our happiness, both here and hereafter, depends on

it. Its interests, therefore, ought to be consulted with the utmost care and zeal. Every effort should be made to impress mankind with a sense of its importance. It should be made to influence every thought and regulate every action, and, if possible, interwoven throughout the whole texture of life.

Religion is necessary to all, but more especially to the poor. The promises of the Gospel are their peculiar inheritance; for, take away the hope of another life, and what have they left? Their portion in the present is, for the most part, labour and sorrow. Humanity, therefore, dictates that they should be taught to look forward to a future state of existence, from which evil, both physical and moral, will be excluded, and in which they will be compensated, by spiritual enjoyment, for their patient endurance of the scorn, the oppression, and the injustice to which they are so often exposed in the present sad and transitory scene.

As the due solemnization and observance

of Sunday is subservient to this important end, I, with Mr. Young, wish them to be promoted in a manner the most effectual. For this the regular attendance of a clergyman, at every parish church, is almost indispensable. It is certainly, therefore, to be regretted that divine service should, in so many parishes, be performed only once in three weeks or a month. When the villagers perceive the duties of religion to be thus disregarded by its ministers, they will, of course, become negligent of it themselves.

This abuse, it must be acknowledged, requires reformation; but the question is, by what means it can be remedied with the best effect? Shall the curates be restricted with regard to the number of their churches, and prohibited from serving at more than two? Little good, I fear, would be derived from this expedient, except their salaries were, at least, doubled. Religion can hardly flourish where its ministers are despised; and a narrow stipend and apparent indigence are, in the

present age, an almost sure passport to contempt.

I conceive it to be beyond the power of the Bishops to remove this evil. The interference of the Legislature is required. Nor will a slight partial alteration suffice. The reform must be radical, perhaps something like an allowance of half the income of each church to the curate. To enforce residence would not cure the evil, during the present mode of bestowing preferment. What good could be followed by the residence of the younger brothers of noblemen, or men of fortune, who receive their livings as sinecures, with an utter indifference for the duties of their profession? Perhaps it may be considered as not much forwarding the cause of religion, in the more active resident clergy, that they are so extremely ready to meddle in temporal and electioneering concerns. Very few of this description are considered by the discerning part of the public as sufficiently independent for a due exercise of Magisterial functions.

Of English ecclesiastics the curates are, beyond doubt, the most useful class, and I think not the least respectable. The amelioration of their condition would, by rendering them more respected, contribute much to the interests of religion.

The security which the established religion of this country has derived from its intimate connection with the Government, and the consequent supineness into which its grave professors have sunk in a long repose upon their plenitudinary benefices, have induced them to forget or abandon that fervour of devotion and faith by which they acquired their rank and consequence with the great body of the people.

The superior activity of their opponents (the Dissenters) has probably estranged a considerable majority of the professors of Christianity in England, particularly the lower orders of society, from the mother church, and they are daily increasing the number of their proselytes.

How far this circumstance will forward

revolutionary principles, or diminish the stock of general happiness, is not a matter within my plan to discuss or determine ; but I am free to conjecture that it will be more likely to engender them, and the consequences that may result from them, than the supposed debauchery of alehouses.

I have somewhere read of a dialogue between a reputed sceptic or profligate, and a high churchman, who assumed to himself, like the Pharisee in the Bible, every righteous act, and who, whilst brandishing a long list of the articles of his faith over the head of this heretic, was inquired of by him ‘ If he really believed in these things ? ’ Upon being answered contemptuously in the affirmative, the other modestly replied, ‘ If I believed in them I would not live the life you do.’

Mr. Young, with that whining cant which so often accompanies the semblance of zeal for the duties of true religion, condemns most severely those who are disposed to allow their labourers to work on the Sundays during a ticklish harvest. He

insinuates, nay almost asserts, that they would be better employed in drinking at an alehouse. And does Mr. Young really think that the morals of the lower class of people would be more corrupted by assisting on a Sunday to preserve the sustenance of man, when threatened with destruction by the inclemency of the weather, than by assembling at a public house, and indulging in all the excesses of ebriety? Will the Gospel, whose precepts he affects to be so desirous of enforcing, supply him with sufficient authority for this opinion? Did the Founder of our religion reprehend his disciples for plucking the ears of corn? Did he not justify his healing on the Sabbath, by the example of the Scribes and Pharisees, who made no hesitation to draw an ox or an ass out of a pit on that day? The last harvest was most singularly unfavourable. Mr. Young, in his *pamphlet on the Scarcity of Provisions*, tells us that the poor now feel the consequences of it from the severest pressure of famine. Will, therefore, any man, whose mind is not

darkened by the thickest clouds of prejudice, assert, that to open and dry a sheaf of corn on a Sunday of the last autumn, was more criminal than to get drunk at a public house? Mr. Young seems to forget that true religion consists in subdued desires, purity of heart, and unrepining acquiescence in the divine decrees ; that the weightier matters of the law are of the moral kind ; and that the solemnization of Sunday is merely ritual, and only valuable as it is subservient to the interests of morality.

Thus have I traced Mr. Young, step by step, throughout the whole of his Report, condemning his opinions where I conceived them to be wrong, and from time to time suggesting such hints of improvement as were furnished by my own knowledge and observation. And if I have sometimes expressed my disapprobation with too much warmth, I intreat the reader to ascribe it less to personal animosity than to an earnest desire of promoting the interests of agriculture. When pernicious practices are re-

commended with regard to a subject so important as the production of the first necessities of life; he who combats them with luke-warmness and indifference may justly be accused of deficiency in the discharge of his duty, and of betraying in some degree that cause which he had undertaken to defend.

APPENDIX.

OBSERVATIONS *on the principal subjects which are treated of in the late publication of Lord Somerville, entitled 'The System followed during the last two years by the BOARD of AGRICULTURE further illustrated: with Dissertations on the PRODUCE and GROWTH of SHEEP and WOOL, as well SPANISH as ENGLISH. Also Observations upon, and a NEW PLAN for the POOR and POOR LAWS. To which are added Remarks on the Modes of Culture and Implements of Husbandry, used in Portugal; and an Inquiry into the Causes of the late Scarcity, and means proposed to remedy it in future.'*

LORD SOMERVILLE has given to the public a work containing a statement of the principles upon which he acted, as President of the Board of Agriculture; and an account of several different projects which he has suggested, or tried in actual execution, for the improvement of the rural economy

of his country. I observe, with concern, that his volume affords much less satisfactory evidence of his ability and experience than of his good intentions. I am induced to add here a few reflections which have occurred to me, in the perusal of his book, respecting some of the principal subjects of which it treats.

PLAN OF THE OPERATIONS OF THE BOARD
OF AGRICULTURE.

The proper business of a national Board of Agriculture certainly is, to collect all the information necessary to enlighten the Government and the Legislature, in regard to such of their functions as respect the rural economy of the country—to communicate to land-owners what will render their estates more productive, to farmers and labourers, whatever instructions may tend to make themselves more skilful and industrious, their labours more useful and profitable—and to aid instruction by example, exhortation, and acceptable præmia.

That plan upon which the operations of this Board were conducted under the late presidency of Sir John Sinclair, if it did not attain to the entire perfection of what is here above stated, yet surely approached as nearly to it as was, in the infancy of the institution, fairly to be expected. He endeavoured to procure a general agricultural survey of the whole island ; he invited the communications of men of experienced skill from all quarters ; he zealously laboured to give, by every possible means, the plainest and most useful literary instructions to the peasant and farmer ; he endeavoured to hold a fund of information ever in readiness to answer the enquiries of the Legislature and Government, though, on account of the inconveniences attending the first attempt, *that information* could not be always so *full* nor so correct as was to be desired ; he expected to form one elaborate survey of the whole kingdom out of the different county reports ; and he hoped also to form, at length, from the facts which the Board was assiduously col-

lecting, *a system of the science of agriculture* in a single volume, not difficult to be understood, nor so tedious as to weary out the patience of a reader; and *a manual of its rules* in the fullest application to all the varying circumstances of this isle, which every husbandman might even get by heart, or at least carry always about with him in his pocket. This plan was imperfect. It was, perhaps, not in the most judicious manner carried into execution; but it certainly approached as near as circumstances would well permit to the only rational plan on which the operations of a national Board of Agriculture can be conducted.

How different that which, certainly with equal benevolence and rectitude of intentions, has been recommended by Lord Somerville! By his Lordship's plan, the functions of the Board of Agriculture seem to have been at once narrowed to those of a mere provincial farming society. Is it possible that his Lordship should have advised the annual expenditure of 1500*l.* in main-

taining an establishment for no material purpose but to distribute 1150l. a year, in præmia?*

The Board of Trade, even when ridiculed to abolition by the eloquence of Mr. Burke, was never half so ridiculous as this. Of the annual publications, it is impossible to avoid observing, that they were, above all others, egregiously unfit for the diffusion of agricultural knowledge. We want not diffuse volumes in 4to, but smaller, more compressed, and less expensive books, more conveniently portable, and with less

* Lord Somerville, in the production of his accounts before the Board, to exhibit the debts which it had incurred under his predecessor, appears to have made no allowance for the value of the printed books which the Board had for sale, either in the hands of its booksellers and printers, or in other repositories: yet the value of these must have been very considerable. Thus the funds of the Board appear much more inadequate to the original plan of expenditure than they really were. The reason his Lordship had for this omission he best knows. Sir John Sinclair ascribes to himself the merit of having been the first projector of the institution. Lord Somerville traces back the first idea of it to the time of Cromwell.

of *difficulty* and labour to be read ;*—not but that papers of observations and experiments upon distinct subjects in rural economy might be properly enough collected, and

* Although Lord Somerville exclaims greatly against the vast multiplicity of agricultural treatises which have overstocked the market,—enough to bewilder the whole kingdom,—and although he approves highly of compressing such subjects, we have not a single hint that a select compressed work of the kind was directed by the ‘scientific knowledge’ of the Board, or by the ‘theory grafted on approved practice’ of his Lordship, during his Presidenship. Such, indeed, might naturally enough have been expected from Lord Somerville, for the benefit of the English farmers, who (he says) are of far more confined reading than their northern brethren, as they might be thus guarded against expending their money, and poisoning their minds, by the purchase of false treatises. Instead of this, what do we find? Why, at the very period that the President is addressing the Board on the necessity of abridging and compressing enlarged works, because it will be difficult to persuade farmers to read the shortest, the Secretary is not only strongly recommending to these honest men all his own voluminous works, but wishes the landed proprietors to force† his ‘Annals of Agriculture’ (amounting to near 30 large vols.) on their respective tenants, for ‘the beneficial knowledge and instruction to be found in them;’ and the Stewards to intimate, that to *such* as refuse ‘no favour will be granted!’

† See the advertisement affixed to Young’s Annals for 1799 and 1800.

from time to time such of them as possessed real merit published in the form of the *Communications to the Board of Agriculture*. But what folly more striking, than to interrupt, for the sake of annual 4tos, the completion of the great agricultural survey of the island? If that survey were imperfect, it was so by the unavoidable necessity of all human things. I would ask, whether the idea of the delay of the general survey originated with Lord Somerville himself? Was it not rather suggested by others who envied Sir John Sinclair the honour he appeared likely to gain by its entire consummation? or by others who, contrary to the moral and scientific truth, fancied that, to give farmers the opportunity of too much reading about their business, would be to excite them to democratical sedition?

THE POOR LAWS.

THE most exalted employments of the human mind sink in their importance, when contrasted with investigations on which depend the welfare and happiness of millions,

and the result of which may equally increase national prosperity and individual benefit. Next to the contemplation of his Creator, the most sublime study of man is the amelioration of his own species. The desire implanted in his mind of bettering his condition is indeed the grand physical, moral, and intellectual stimulus to all his great and beneficial exertions. The influence of this invigorating spirit on commerce, on manufactures, and on agriculture, has been felt and acknowledged ; and there can be little doubt that the same principles, if encouraged among the poor, would generate that industry and prudence in vain sought for by compulsion. Every being, by turning his thoughts to the operations of his own *will*, cannot be insensible that little is to be effected by *compulsion* : for, where *force* begins, *inclination* and *attachment* cease.

The poorer classes form by far the greatest portion of the human race ; and their interests are so interwoven not only with one another, but also with those of all the more

elevated ranks of society, that there is no subject more worthy of attention, or requires more profound or deliberate consideration. It becomes the rich and powerful, therefore, to unite their leisure and their influence with the talents of the wise and the labour of the industrious to promote this beneficial purpose. Ease and distinction of fortune are thus bestowed,—That, being at rest from all cares of providing for themselves, they may apply their hearts, heads, and hands for the public advantage of others who stand in need of it.

The question, whether the affluent support the indigent, or the indigent find the means of support to the affluent, has been, at various times, idly contested. All the gradations of wealth, rank, and condition, are parts of one harmonious whole, in which the defect of the least component part produces discord. Each in his station, while he performs his duty, contributes to the general mass of industry, instruction, and ultimate happiness. The poor man is,

equally with the rich, a necessary link in the great chain, although wisely ordered, from his limited knowledge, that he should not perceive his own importance. The higher classes, by their power, their education, and their knowledge, when wisely and properly directed and exerted, contribute in a very eminent degree to this aggregate mass.

‘ Rank, power, wealth, influence, (says the benevolent and ingenious Mr. Bernard) constitute no exemption from activity or attention to duty, but lay a weight of real accumulated responsibility on the possessor. If the rich are *selfish, indolent, and* NEGLECTFUL OF THE CONDITIONS ON WHICH THEY HOLD SUPERIORITY OF RANK AND FORTUNE, they sink into a situation worse than that of being *gratuitously maintained by the poor*. They become PAUPERS *of an elevated and distinguished class*; in no way personally contributing to the general stock, but subsisting on the labour of the industrious cottager and artificer: and whenever Providence thinks fit to remove such characters, whe-

ther in *high* or in *low* life, whether *rich* or *poor*, the community is relieved from an useless burthen.*

From the most authentic information which can be obtained, it is ascertained that upwards of *five millions* are expended annually for the relief of the poor in England, arising from two sources, viz. *parochial rates* and *voluntary charitable benefactions*. And lamentable it is to observe, that this immense sum is found inadequate to the improvement of the condition of that numerous class of our national population: for, instead of its diminishing the number of poor, or making a less sum necessary for the support of the present poor system, within the last fifty years it has increased 500,000*l.* a sum by no means compatible with the increase of the population of the kingdom.

Some have considered this as a necessary consequence of national prosperity, however

* See Reports of the Society for bettering the Condition and increasing the Comforts of the Poor, vol. ii.

unaccountable that species of prosperity must appear which is hostile to the comfort and happiness of the great mass of the people, and operates as a diminution of their means of life. Others have concluded it to be an indication of national decline, which states exhibit that have passed their zenith. By a third party it has been ascribed to the rapid increase of rents, to supply the extravagant necessities of the more elevated ranks, which has generated an improvident system with regard to the poor, inimical to any permanent improvement of their condition, and discouraging good habits.*

But all have agreed that their condition requires amelioration. The difficulty consists in the mode. The wisdom of our countrymen for upwards of two centuries has been employed to devise such a plan, without effect. Industry has been attempted

* See Proceedings of the Society for bettering the Condition of the Poor, &c.

to be enforced by penal laws and compulsory statutes, without even checking this growing evil. It is now high time, therefore, to enquire whether the same beneficial object may not be attained by 'encouragement, by kindness, by management.' 'Charity should elevate, and not depress the object of her attention: it should increase the energy, the virtue, and the hopes of the poor, so as to attach them to their situation in life, and give stability to their moral and religious character:' for difficulty of providing for his family makes the labourer careless of them, till he at length deserts them, and vainly seeks for solace in an alehouse, where he finds only a temporary oblivion of his daily cares: a practice at present not uncommon. Should that not be the case, the devotion of his whole time to the purchase of a bare subsistence destroys forecast, (periodical relief produces the same effect), renders him regardless of futurity, till overtaken by sickness, misfortune, or increase of family, he is driven into the

work-house, there to remain ‘ the pensioner of the public ;’ leaving his children and relatives without the natural parental controul, to acquire idle and unprincipled habits among the dregs of the parish.

The Society lately instituted in the British metropolis for ‘ Bettering the Condition and Increasing the Comforts of the Poor,’ consisting of the most enlightened, disinterested, and benevolent men in the kingdom, have been indefatigable in their researches to promote the object of the institution. They have laid a large body of facts before the public, the plain and undeniable inference from which is, that the present mode of administering relief is ineffectual to produce the desired end. They do not themselves yet pretend to suggest a better plan: they only propose regulations.

From the result of their inquiries, they are convinced that the best and most economical application of parochial funds is that which tends to encourage industry and good

management among the poor, *in their own cottages or homes, in the care and conduct of their own families, and in placing out their children, at an early age, in a course of industrious employment.* That the parish children would be boarded and instructed at less expence by cottagers' widows, from whose care they would enter, at an earlier age, and with more character and principle, into service. That in those parishes, where the *cottager* has been supplied with a good cottage* and garden, and the means of keeping a cow at a fair and moderate rent, the labourers are the steadiest and most orderly men, the poor rate is greatly reduced, and the value of landed estates much improved. That in cities and manufactories, the corruption of human nature,

* Cottages, with few exceptions, are found to be deficient both in number and condition, the inhabitants suffering in health and cleanliness, for want of that accommodation which is necessary to life and well being. The benevolent Count Rumford recommends that they should be frequently white-washed with quick-lime, not only the ceilings but the floors and walls.

the vicissitudes of things, contests of nations, mutability of fashions, ebb and flow of prosperity, perpetually produce objects of distress beyond any power of adequate parochial relief. That *workhouses*, while they are made the common receptacle for all who apply for relief, will, in their general effect, be the cause of injustice and unkindness to many individuals, and of prejudice and injury to the parish. That if none were placed there but the aged and infirm who have no domestic retreat to fly to,—none who could do better out of them,—the poor of that description would find them comfortable asylums. That the overseers and other managers of poor-houses should be chosen from among a more enlightened and higher class of society (who at present concern themselves very little about the poor), and that they should continue longer than one year in office. That the conversion of corn-mills into mills for manufactures has entailed injuries on the poor considerably exceeding one million of money per annum, by the increased price of the first

necessary of life, occasioned thereby. That if *county jails* were to afford encouragement and inducement to work, by a liberal share of earnings, and by a distinction of food and treatment between the idle and industrious, and between the profligate and well disposed, they would be sent forth with character, and with the means and habits of industry and livelihood.

The Society recommends that proper occupations should be found for the poor. That parochial corn-mills should be erected throughout the kingdom by general or local subscription, taking only five cent. for the money sunk and employed. That village kitchens and soup-shops,—shops for the supply of coals, corn, potatoes, milk, cheese, bacon, and other necessaries,—should be established in every town and village, by the respective proprietors or others, taking only, in the same manner, five per cent. on the money expended. That in the construction of their dwellings and chimnies an improvement may be recommended, to lessen the

consumption of fuel, and add to the warmth and comfort of such dwellings. That a mode of making more cheap and nutritious food than any hitherto in use may be adopted by the poor. That the use of machinery, although unquestionably (from the advanced price of labour) the surest means of extending our manufactures and commerce, has increased the number of poor, by diminishing employment.

That the best support the poor can receive is from themselves. That therefore the maxims . . . opted at Hamburgh, in the execution of a similar plan, cannot be too strongly recommended, viz. That every allowance, which supersedes the necessity of working, becomes a premium to idleness: that labour, not alms, should be offered to all, who have any ability to work, however small that ability may be: that one shilling which the poor man earns, does him more real service than two that are given him: that, if the manner in which relief is given be not a spur to industry, it becomes in effect

a premium to sloth and profligacy: and that if the mere support of a pauper is above what any industrious person in the same circumstances could earn, idleness will become more profitable than industry, and *beggary* a better trade than the *workshop*.*

Having thus enumerated the various regulations and proposals for ameliorating the condition of the poor, advised by that Society and other humane individuals, it must appear evident to every person who takes a comprehensive view of the subject, that, however wise and proper as *collaterals*, they fall far short of an *efficient* whole.

It is not alone sufficient to support the poor when they are reduced to want, but to give scope and increase to the energy of individuals, by affording to all the opportunity and the hope of advancement in life, and

* In proportion as the conductors of the institution : †
Hamburgh have rigidly adhered to these maxims, they have found the benefit extended and increased : whenever they have relaxed, the *thermometer of industry* has been lower, and less work has been done.

thereby diminishing the number of those soliciting parochial and other relief, and ultimately reducing to a very inconsiderable amount both the present parochial rates and voluntary charities, if not altogether expunging them.

The experience of two centuries has proved that the compulsory system of managing the poor has proved ineffectual: it has failed to make them useful members of society, and to bring them to habits of industry and frugality, although armed with the power of confinement and punishment. That being the case, how could the compulsory plan of Lord Somerville, possessing less energy and power, be rendered efficient? At a time when the poor are taught to believe that they do not possess their due share of property, and are with difficulty enabled to support themselves, would not compelling those, at present chiefly subject to no parochial assessment, by a direct tax, to contribute out of their small pittance of earnings for the relief of others, occasion fraudulent

evasion as of other taxes, combinations for advance of wages, or general discontent and resistance, not only against their employers (who are by this plan bound to make weekly deductions from them, and to be answerable for the contributions of all those they employ, whether they obtain these or not), but against the Government itself? * As compulsion evidently will not answer the purpose, some other mode, less objectionable, must be sought for.

FRIENDLY SOCIETIES, according to the best information that has been collected, when legally and properly established, are sure and unvaried in promoting industry, economy, philanthropy, and every virtue, among the poor. †

Of all means yet imagined to relieve the

* The plan of Lord Somerville is so ably discussed and refuted in the subjoined papers of correspondence of those to whose opinion his Lordship submitted it, especially in the first, that to these I shall refer my readers for information as to its impracticability.

† See the Proceedings of the Society for bettering, &c. the Condition of the Poor.

poor, none so good, none so certain, none attended with so many moral and frugal consequences, as the giving encouragement to FRIENDLY SOCIETIES supported by *voluntary* contribution. I believe it is practicable to extend the existing spirit of such societies far beyond what it receives from any existing law, and that without trenching on the freedom of *will*, which is the essence of their being. For the principle on which they have originated, grown, and prospered, is a sense of independence of parochial relief or interference, together with the pride of governing themselves.*

I propose, therefore, an institution to be established throughout the British empire, into which every person is to be admitted according to his capacity, from the prince to the peasant.

Voluntary subscriptions to this fund from all persons of every denomination, of what-

* See the remarks of Lord Somerville's first correspondent.

ever country or religion, to be received weekly, in such small sums as they are able to afford, for the individual benefit of the subscribers.

The subscriptions to be divided into classes, that it may be optional to each individual, according to his means and his situation in life, whether married or unmarried, with or without children, of an income of ten shillings or twenty shillings, &c. a week, to provide for one particular case, or for all. The benefit derived of course to be in proportion to the duration and the amount of subscription.

The classes to be the following, or otherwise: 1. To provide for sickness.* 2. For

* ‘If the poor man, who exerts himself in bringing up and placing out his family, is encouraged and assisted in his honest endeavours, and, in case of any untoward and unfortunate interruption of his plan of economy, receives timely relief, and is preserved from the apprehensions of want or parochial charity, the thrift and success of a few will produce many imitators, and the prospect of improved circumstances will awaken the energy of the poor in all parts of the kingdom.’

lying-in. 3. For children, when of age (or at any particular stated period) or for marriage portions.* 4. For unforeseen misfortune. 5. For old age. 6. For funeral expences. 7. For widows. 8. For providing stock, or to answer any other useful purpose whatever.

The establishment to partake as much as possible of the nature and the principles which direct Friendly Societies at present, both on account of their utility, and to lessen the prejudice of the uninformed against untried schemes. The principle of choice and the right of governing their own concerns to pervade every branch of the institution.

* Not only the parents, but the young man and young woman in service, and in every other occupation of life, would be induced to save out of their wages a little fund of wealth against their respective marriages, to convert into the means of comfort during life, by becoming a small trader or the possessor of a cow, a cottage, a garden, &c. of his own. They would thus acquire early habits of prudence and economy, and would enter into life with a more principled system of conduct. It would also encourage marriages, diminish prostitution, and ameliorate the manners of the lower classes of the community.

A certain number of societies, or branches, to be established in every populous town, and in every county, either according to proximity of neighbourhood or classed according to ages, or both. A Committee of each society to manage its own concerns: of these, each member in turn to officiate as Clerk. The conduct of the Committee to be, nevertheless, subject to the controul of the society at large, and examined at monthly or quarterly meetings, as occasion may require. One or two principal landed proprietors in every district, chosen by a majority of voices of the society or societies in such district, shall officiate gratuitously as Treasurer or Treasurers, to avoid placing the money in improper hands, as frequently has been the case, as well as to abolish the pernicious practice of resorting to alehouses on such occasions.*

The subscriptions of every society to be

* Thirty-four thousand single meetings of this kind are annually held in the metropolis and environs alone.

transmitted weekly to a General Receiving Office in the capital town of each county, for which purpose a room is to be granted gratis at the Town-Hall, or any other public building. A deputy from each society to have a voice in the election of Directors of this office. But no parish officers or acting magistrates to be admitted into the number of Directors, the lower classes being much prejudiced, however unfoundedly, against gentlemen of that description.

A general establishment for the whole empire to be fixed in London, under whose guidance all the branches are to be placed, and to which the subscriptions from every county are to be remitted weekly, or once a fortnight, as most beneficial for the interest of the whole. The Directors of this central establishment or union bank to consist of the most enlightened, benevolent, and disinterested characters in the kingdom, who are distinguished for both property and probity. These to officiate gratuitously, and to be elected by the County Directors. A fresh election for one-third of the Directors, both

country and town, to take place every year (similar to the Directors of the East India Company) in the room of an equal number who vacate their seats. The central bank to have a free seal.

These Directors to lay out the money received weekly in Government securities, and to obtain a power from Parliament to issue notes, similar to the Bank of England, that the real specie might be converted to the most profitable uses, consistent with the security of the establishment and the public.

But, as the charter of the Bank of England would probably render this part of the plan impracticable; and even if practicable, would be attended with jealousies, from the counteraction of interests; a department of the Bank, appropriated for that purpose, might equally answer every purpose of this institution, and prevent those jealousies from operating to its injury. The benefits arising from the issue of notes, &c. to be estimated, and such a portion assigned to this fund as the exclusive privileges of the Bank would allow. The clerks, and every other person

employed, to be members of some branch of the establishment.

For governing the central institution established in London, the deputies from each society in a county to ballot for three candidates, of which number none shall be a County Director. Out of these, sixteen are to be elected by the County Directors, and six by the House of Commons: to which are to be added six of the regular Bank Directors, chosen also by the County Directors. Other subordinate appointments would, no doubt, be necessary, that the duties of each station might be carried on without counteraction or interference, in regular gradation, from the most simple link in the chain to the ultimate controuling power. The accounts to be kept with all possible publicity.* The

* ' One great cause (says the Reporter of the Society for bettering the Condition of the Poor, &c.) of the success of the institution at Hamburgh has been the publicity and regularity of the accounts. Without this, all charities become jobs, the Directors grow indifferent to public approbation or censure, and the administration falls into the hands of under officers, who soon learn so to entangle the business, that no subsequent Director is ever able to unravel the clue.'

state of the aggregate fund, as well as that of every individual branch, properly balanced, to be transmitted quarterly to the capital of every county, and from thence to every district in the kingdom.

The Directors would be enabled, from so universal a subscription, to make weekly purchases into the funds. The price of stock would of course be variable. On that account, three per cent. simple interest, with the compound increase, is all that ought to be expected by each individual, in the first instance. But, as a great portion of the money would produce five per cent. the surplus above three per cent. after paying all expences attendant on the undertaking, should be suffered to accumulate for a certain number of years, to provide for particular exigencies, the application of which to be determined by the voice of the subscribers—perhaps every ten years. All the friendly societies at present in existence throughout the kingdom, I propose to be incorporated into this institution, because they would derive far greater advantages

from it than they at present enjoy. Their subscriptions would then be weekly accumulating interest, simple and compound: whereas now, from the limited number of each society, and the small amount of their contributions, they rarely are enabled to purchase into stock oftener than half yearly, and frequently not so often. From the benefits likely to accrue to the nation from so universal a scheme, the wealthy of all descriptions, it may be fairly presumed, would be liberal contributors, (without requiring any return) to *at least* one-third of the whole of the fund. Many legacies too might be expected from the benevolent. The present funds of the friendly societies throughout the kingdom I may moderately estimate at THREE MILLIONS. The security and advantages offered by the new establishment would induce these societies to appropriate this sum to three, or all of the classes already enumerated, according to the chioce of a majority of each society. For, if as separate societies they obtain sufficient support in sickness, &c.

how much more from the aggregate fund of the whole empire, accumulating weekly!

Wise and useful as these benefit clubs however are, according to their present establishment, yet there are several objections to be stated against them. Their monthly meetings in public houses lead not only to an irregular and idle life, but also to the useless expenditure of sums of money which might be turned to more beneficial purposes to themselves. In and near the metropolis thirty-four thousand single meetings (as already mentioned) are held in alehouses yearly. Now if we calculate fifty to each meeting, at six-pence per head spending-money, it will amount to 42,500*l.* annually; and may be considered to amount throughout the kingdom to nearly 500,000*l.** every year; a sum which, with simple and compound interest, would add a vast increase indeed to the fund. But this is not the sole evil: there are two

* Equal to the increase on parochial rates for the last fifty years.

others of equal consequence. 1st. The publican, in whose house the club is held, is usually the treasurer, which, in cases of bankruptcy, have subjected these societies to frequent losses; for, it has been too often found that these gentlemen have appropriated to their own purposes the money entrusted to their care. 2dly. Many benefit societies have, by many years contribution, accumulated a fund of some hundreds of pounds, towards which the eldest members have been the principal contributors. It has often occurred, that these have been overruled and outvoted by a number of new members, in a project of dividing all money in hand, in order to dissolve the clubs, to the great detriment of the former, who subscribed, for many years, to provide for infirmities, of which they have been thus unjustly deprived.* This shews the necessity of a ge-

* A remedy is provided by a late act of parliament against this evil for such of the societies as have registered, within a given time, their rules at the Quarter Sessions.

neral legally established society, which individuals, from caprice or selfish motives, could not destroy.

Now as it is incumbent on the Government to be the first to patronize and encourage a project of national utility, I conceive that it would be wise in Parliament to vote ONE MILLION of money as a basis for this fund. That sum would not only be a strong temptation to the present existing friendly societies to come forward with their capital, but it would produce so great activity of exertion and rapidity of contribution from both rich and poor, throughout the kingdom, that in the course of three years the fund would be so far advanced, as to be enabled to issue supplies for the exigences of some of the classes of new subscribers. As to the benefit clubs already established, such as became members of this institution should immediately derive the same assistance which accrue to them at present from their respective divisions.

The exact amount of benefit arising to

each person from this institution,—depending, 1st. on the amount of his own subscription; 2dly, on the amount of the subscriptions of the wealthy who do not intend to partake of the benefit, in addition to the public grant of one million; and, 3dly, on the number of sick at any one time,—is not, from so cursory a view of it, easily to be calculated. But admitting that every individual contributor were to enjoy a return from what himself alone subscribes, at 3 per cent. interest, it would be as follows:—If a man of 22, with his wife of the same age, should contribute a penny each weekly towards funeral expences,—to each, at his or her death, would be due 10l. 1s. but if the husband, on subscribing, is 37 and his wife 26, then 8l. 1s. 6d.

A husband of 40 may, with 3d. paid weekly, provide an annuity of 2l. 3s. 4d. for his wife of 43, to be paid to her half-yearly after his death: and if the husband and wife should on subscribing be 22 years, in that case the annuity would be 2l. 10s 4d.

A person who at the age of 20 commences to lay out in such an institution 6d. weekly, will at the age of 50 be entitled to an annuity of 6l. 9s. or if commenced at 30, his annuity at 60 will amount to 9l. 14s. But it should be so contrived that a subscriber may at any time enter into his annuity when he chooses, according to his age and the length of time he has contributed.

A father or mother under 30 years, who pays for a child under one year six-pence weekly till 21, will at that period obtain for the said child 38l. 10s.

But if to the above were to be added each person's division of donations given, legacies left, contributions of the wealthy, share of the public grant of one million, and surplus of interest above 3 per cent. as well as the accumulating profit arising from the circulation and destruction of notes, the return would then be very considerable indeed!—perhaps above triple the above sums.

As encouragement to this fund, the sick who stand in need of relief might be paid in

money by the parish, weekly, a few shillings additional, on the representation of the stewards of their respective branches, to allow time for the augmentation of the fund:—but this to continue only for a limited time.

This plan not to supersede entirely the present poor system. Certain parish rates still to remain on the opulent—such as attending the provisional cavalry, militia, navy, army, and some objects of relief who could not be comprehended in this institution. As to the rest, it would die away gradually of itself.

In every small town (and a proportionate number in large towns) an apothecary, skilful in midwifery and every other branch of his profession, should be fixed; to whom every subscriber, in case of sickness, should apply for advice and medicines, which he would be enabled to give at a cheap rate, as, being paid by the institution, he would be subject to no losses. Local corn-mills, slaughter-houses, shops for selling coals, articles of clothing, and all the necessaries of

life, by retail, should also be established in every town or district, adding only five per cent. to the prime-cost of the articles. These might be managed by superannuated members capable of keeping accounts. A portion of the surplus of the fund arising from the interest of *above* three per cent. might be productively applied for these purposes. A certain portion likewise might be distributed in premiums, to be given at the end of every ten years, or any other fixed periods, to those who best conducted themselves during that time, in the various qualifications to be afterwards described.

When we consider that, besides the temporary sums bestowed in daily charity by individuals, nearly three millions per annum are voluntarily contributed for the support of hospitals, &c. &c. and when we add to this the portion of the parochial rates of two millions and a half at present ineffectually appropriated for the relief of the poor, I may be permitted, without much exaggeration, to estimate the aggregate amount of

the fund, at the end of three years, not far short of TEN MILLIONS. Let us contemplate but for a few minutes the effect of this vast floating capital on the industry, the health, moral habits, and energy of the people, and we shall be no less surprised than gratified at the incalculable benefits which are likely to arise therefrom to the nation !

The objection, that masters of families must suffer because an independence of interest is established by servants, is more applicable to some of the actual benefit societies to which servants subscribe for the maintenance of each other, when sick or unemployed, than to such a general establishment. As all money is to be placed in Government securities, it will tend not only to make the lower classes of the people useful, sober, and industrious members of society, but likewise, by giving them an interest in the general weal, making them voluntary contributors to the public stock, and by measuring the relief of their necessities by their contributions, they will become more and more

cemented and united to their masters, country, and government, because they will perceive that they are treated with paternal foresight ; and their own interest must determine them to do their utmost in supporting the stability of those funds into which they have made their deposits, and to which they have to look up for undeniable relief.

These are the outlines of an Universal Friendly Society for the whole British Empire, which a hasty perusal of Lord Somerville's book, and the productions of others, suggested to me. I do not usher it to the public as a plan in any degree perfect ; but merely as hints to others who have more leisure to examine, and more capacity to devise one less defective.

If carried into effect, it would be one step towards diminishing the number of paupers, and increasing the independence of the lower classes of the community, as to public and private charities. But something more remains to be done, to promote, to any great extent, individual prosperity, and at the same

time that of the nation at large. That shall be the next subject of my consideration. The establishment already devised will enable those in employment to make savings for future wants. This is intended to provide employment for those who, from the introduction of machinery into manufactures (a practice more likely to increase than to diminish) and from whatever other causes, have it not; and who, consequently, form a considerable portion of the itinerant mendicants and paupers depending on parochial relief. This branch of my subject I shall divide into three heads,

1. To find not only employment, but to give scope and energy to the industry and talents of the more enterprizing and deserving of the labouring cultivators of the soil.

2dly. To grant public aid to the endeavours of that patriotic institution, the BRITISH SOCIETY, and other enterprizing individuals, for extending the *Fisberies* of the British empire; a source from which the Dutch, for a long period of time, and even

on a partial scale, have derived upwards of three millions per annum, to the eternal disgrace of the British Government; a never-failing source of *CREATING MONEY to an incalculable extent*—whether we view its influence operating on our internal prosperity, or in advancing to an infinite degree our commercial greatness, and providing for our national defence by the inexhaustible nursery which it affords for seamen.

3dly. To afford assistance to those, and consequently to put within their reach the means of advancement in life, who, from want of success in any business in which they have been engaged, and who, from being entirely destitute of friends in a condition to assist them, are reduced to penury and distress, and too often become the inhabitants of a loathsome prison, in which the moral system is contaminated, and former habits of industry destroyed: also, to many ingenious and deserving young mechanics, artificers, &c. who, not possessing means themselves, or friends to help them,

are unable to rise above the sphere of journeymen for life ; but who are well calculated for a more exalted station.

For this purpose, in addition to the fund already proposed, I am of opinion that a sum, perhaps amounting to THREE MILLIONS more, should be voted by Parliament, under the management of the same Directors. But it may be asked how is this fund to be raised ? I answer—Let a certain portion of the Income Tax, after the conclusion of the war (having been first raised for that period) be employed in this grand national object : Or sell the Crown Lands, or a certain part thereof, adequate to the production of the necessary sum. Would not the sum annually applied to the liquidation of the national debt be in such a project more beneficially employed ?

First, then, let me define my plan for the cultivators of the soil. The waste or uncultivated lands in Britain (the extent of those in Ireland I do not possess the means at present of ascertaining) are estimated to amount to

twenty-two millions of acres. Of these, one million is reckoned to be incapable of improvement; three millions fit for planting;* fourteen millions for upland pasture; one million for meadow, or water meadow; and three millions of acres fit for tillage. The first may be reckoned of little value; the second may be worth 8s. per acre, or in all 1,200,000l.† per annum; the third, at least, 5s. per acre of rent, or 3,500,000l. per annum; the fourth, 1l. 10s. per acre, or 1,500,000l.; and the fifth, 10s. per acre, or 1,500,000l. The three last divisions, multiplied by three, in order to give the annual produce, will amount to 19,500,000l. to which add 1,200,000l. annual produce of the plantations, and the whole will then be

* By plantations, barren spots may be rendered, in process of time, fertile; for, from the leaves which fall, and the shelter they receive, they every year improve; and when the trees are ready for the axe, many parts would be fit for cultivation.

† This, however, is the value of the annual produce, and not of rent.

20,700,000l.* Of the whole value of these wastes, were they improved to their utmost capability, it is difficult to form an adequate idea. Nor could it be attained without great industry, exertion, and expence. The wealth to be acquired from this improvement is not the sole object of national consideration. The increase of population, and the bettering the condition of that class of persons who are justly esteemed a country's strength and pride, deserves peculiar attention. The additional number of inhabitants who would thus receive occupation and subsistence I cannot exactly determine. But admitting the three millions of acres capable of being converted to tillage, to be divided into farms of from twenty acres each of arable to one hundred, with proportionate pasture, allowing one person to every other acre of pasture

* See the Report of the First Select Committee of the House of Commons, appointed to take into consideration the improvement of the waste lands, with the sentiments contained in which I in general concur.

land, the number could not be less than from two to three millions of people.*

Here, then, is a wonderfully extensive field for increasing the prosperity of this country! † The delays of office, the prejudices, and the discordant interests which have hitherto procrastinated or impeded the passing of a general law for inclosing ‡ these wastes will, it is to be hoped, vanish, when so great an object as the amelioration of a most numerous class of the community, at present pensioners on the bounty and charity of those very men of prejudiced and discordant

* America, when she first erected the standard of independence, did not exceed this population. The evils were then felt from the extent of such a population at a distance: but the reverse would be the consequence of such an increase at home, each individual possessing an interest in the soil.

† Sir John Sinclair, highly creditable to his heart, while President of the Board of Agriculture, exerted himself greatly in endeavouring to convert this extensive tract into a source of productive industry.

‡ It may not be unworthy of observation here, that inclosure renders a country more defensible. Every hedge and ditch becomes a rampart, through which an enemy cannot readily penetrate. Between the capital, therefore, and the coast there should not remain an uninclosed spot.

spirits (consumers of the industry of others, without contributing themselves in an equal degree to the aggregate mass of national industry) is taken into consideration.

It is necessary, before this part of my plan be carried into effect, that such a general law should pass ; and I cannot imagine that the time is far distant when it will be effected. In this bill regulations ought to be introduced for giving cottagers a decided preference, with respect to locality, over larger rights, &c.

On such an occasion, if a general exchange were to take place (as suggested by the Reporters for Dorset and Hants), and each individual accommodated with an allotment of land equivalent to the value of his common-right,* laid together as much as situation and

* The idea, that commons are an excellent nursery for rearing cattle, is absurd. To prove that they are well calculated for *stunting* the *growth*, or rather *starving* the animals of every description, a whole volume of evidence might be adduced.

It is well known that waste lands and commons are let

circumstances would admit, and each man's right specifically defined and divided, the remainder, in those instances in which the Government is concerned, would, perhaps, be sufficient for the purposes of my plan.

In a former part of this work I condemned the present cottage system, because at the time of writing on that subject no suitable provision appeared to me against fortuitous circumstances and the vicissitudes of seasons. Such a provision, however, forms one of the objects of the first division of this plan. On

in many instances at the low rate of 1d. per acre; in others, that persons do not think it worth their while to avail themselves of the privilege of sending stock to pasture on them; and that it is a right often attended with loss instead of a benefit.

This argument applies fundamentally against Lord Somerville's preference of the Spanish sheep, which require to be fed on the short herbage of uncultivated land, in as much as the subsistence of man is an object of greater importance than putting a *fine* coat upon his back; as may be seen by the following comparison: in 1710, when half the stock of the kingdom were fed on commons, beeves sold at Smithfield market weighed, on an average, 370lbs. calves 50lbs. sheep 28lbs. lambs 18lbs. Now, beeves weigh, on an average, 800lbs. calves 148lbs. sheep 80lbs. and lambs 50lbs.—More of this hereafter. *See the Report already quoted.*

the estates of the Earls of Egremont and Winchelsea, &c. it appears that, from the benevolent treatment of these proprietors, the permitting cottagers to rent land at first hand is attended with very beneficial effects, both on morals and prosperity. But when they are rack-renters, as is generally the case, they have by no means been equally successful. To give the poor man a probable chance of doing well, and prevent jealousy and depression of spirit, he must occupy his little pittance of land at least on as low terms as the adjoining farmer, and he should hold of the proprietor, not of the farmer who provides him employment. For that purpose, a few acres might be parted off from every large farm, &c. as Mr. Kent recommends, so that they might be distributed over the estate in a manner most convenient to their respective employers.

In cottages, as in farms, it would, indeed, be wise to make a gradation, from a rood of land and a small cottage to nine acres and the larger cottage described by Mr. Kent. From

this progressive advancement, to reason from the surest datum,—*experience*,—no bad consequence, but the contrary, is to be apprehended. In those instances where they held sufficient pasture and increased the number of their cows, &c. instead of attempting to subsist as small farmers, they have been found the most steady and most trusty labourers, and the most early and punctual in their payment of rent.* The latter character, indeed, extends generally to the whole class of cottagers, small and large, under good and kind management. The gradation I advise should of course be limited to exemplary good conduct, industry, and economy; and thus incite a spirit of enterprize and emulation, to which, with the security afforded to property, is ascribed the commercial and manufacturing prosperity of Britain.

Having then admitted that a cottage sys-

* See the Proceedings of the Society for bettering the Condition of the Poor, &c.

tem, with a provision against fortuitous circumstances, may prove beneficial to the lower and the higher classes of the community, the next consideration should be, which of the modes of settlement hitherto adopted is best suited to produce the object in view, viz. the cottager's happiness, prosperity, and good conduct, (consistent with the proprietor's true interest), and rendering him independent of parochial relief. And here I may be permitted to observe, that, whether viewed in a political or moral light, the labourer who has property, however small,—a cottage, a cow, a pig, or even the crop of his garden,—considers himself as possessing a permanent interest in the country, in its welfare and tranquillity, and in the good order of society: whereas the mere labourer, having no attachment to that prosperity or that constituted order of property in which he has no share, easily becomes the votary of demagogues, and is always ready for a change, which, in his opinion, cannot render worse, but may better, his condition. I am therefore persuaded, that the

preferable mode is, to let the cottager the portion of land that shall be fixed, on a lease for lives, or years; and that he shall be encouraged to build his own cottage,* fence and cultivate his own garden, and purchase his own cows, &c. and that where his own means are deficient to effect these purposes wholly, he shall receive *aid*; not to be paid into his own hands, for fear of misapplication, but to be expended in the progress of the business. How, it will be asked, is this aid to be obtained? It cannot be in general expected from the proprietor, and especially at an interest to answer the poor cottager's

* 'Cottagers who build their own cottages,' says William Morton Pitt, Esq. 'are the most industrious, sober, and frugal; and their dwellings have an appearance of neatness and comfort not to be seen elsewhere.' 'A man who owns a house with a large garden annexed to it, on a lease for lives, for which he only pays a moderate quit-rent, is richer by far than he who receives much higher wages, but who has to pay rent, and for every article he consumes.' 'The cottager who builds a house for himself possesses these advantages—permanency of property—respectability of situation—that all improvements are for himself—and that he cannot be removed.'

purpose. For it is well known, that at this time many very important improvements lie dormant, because money cannot be borrowed at five per cent. although on the security of some of the richest estates in the kingdom: and this must often, if not always, be the case in time of war. But, it may be said, that the sums requisite for this end would fall so light on every proprietor that no apprehension ought to be entertained of disappointment. I do not agree, however, with such opinionists: for I find, with few exceptions, that every landed proprietor lives up to the full amount of his income, and that he oftener exceeds than confines himself within it. It is a general complaint, that the fast advance of rents to supply these exigencies is a principal cause of the increase of parochial rates in the country parishes. Besides, trusting to this source altogether would be very fallacious, when we consider that many proprietors seldom or ever visit their estates, and that many agents, who neglect the essential interests of their principals, would be little disposed to

befriend the poor cottager, and would sooner promote their own dependents than the combined interests of the cottager and the landlord. At the same time, a field should be always open for the benevolence of the proprietor to exert itself.

It will very often happen, that an industrious labourer and his wife will, by the savings they have made during their servitude, be enabled to accomplish a great part of the business; and, after subscribing for some years to the subscription benefit fund which I have proposed, may derive from it what they are deficient. But, till this fund begins to operate, what are they to do? To supply that interim is one of the objects of the sum of three millions to be granted by Parliament which I have suggested. Upon the certificate of the proprietor, on whose estates these cottagers should be settled, and of the farmers by whom they are employed, of their industry, savings, and general good character, such proprietor to obtain, as a loan, from this fund such sums as shall ap-

pear necessary for their purposes, and at the same time prudent to be granted, for a period of seven or ten years, at two per cent. interest for the first three years, at three for the next three years, and at four per cent. for the remainder, which would stimulate the frugal man to repay the money before the latter increase of interest commenced. The principal to be repaid in such instalments, during that period, as they could afford. The care and attention of the proprietor would be thus interwoven with the interest of the labourer.

The payments and re-payments, principal and interest, might pass with readiness, and with little or no expence, by the medium of the general and local societies throughout the empire.

Thus the improvement of the cottager's means of life *in his own cottage*, increasing his resources by exciting him to thrift, industry, and good behaviour, would produce the RESTORATION of the nerve and strength of the country, and exchange the sources of enormous and increasing expence for the

means of wealth and prosperity: and it would *execute itself*; while the support of all public charitable establishments would require a never-ceasing continuance of exertion, to provide for the maintenance and relief of HOPELESS dependents.

On the middling class of society depends very much the stability of every free government like that of Britain. It forms, if I may be permitted the term, *the fourth deliberative branch of the British Constitution*. It is the equipoise between the pyramidal summit and the broad base. On all occasions of danger from external or internal foes, that class has stood firm in defence of the real interests of their country. It has been asserted and lamented by many that this middle class has been gradually declining for many years past. Let us then, before it is too late, check the growing evil. To suggest the means of doing that is the next object of my consideration, in which I shall adhere to the same gradation as before.

The plan I have, in the preceding pages,

laid down for bettering the condition of cottagers is, in my opinion, so desirable and attractive, that if acted upon, a sufficient number of that description would never be wanting for the farmer's labour. Indeed, if we examine the history of civil society, I doubt not but we shall find, that for one man who has means, enterprize, skill, and ambition to launch into a more elevated and enlarged sphere of life, one hundred are contented to remain in that situation in which their lot first placed them, provided they obtain with facility the means of comfortable subsistence. And yet the hope of a higher condition held out to them, and put within their reach, spurs them on to ameliorate their existing circumstances. Admitting this position (and I conceive that it will be generally admitted) there is no danger that the lure of a superior situation will render them careless, inattentive, or idle in an inferior one; because it is by the very opposite conduct alone that they can be advanced.

Now what I propose under this head is,

that of all the cottagers throughout the kingdom, a selection should be made of those who should make the greatest savings according to their means, who best have educated and reared the greatest number of children (for this, among other advantages, would encourage matrimony); who have been the most moral men, the best husbands, fathers, and neighbours; who have conducted themselves with the greatest sobriety, frugality, industry, and duty to their superiors, for a certain number of years in that situation.* To such of these as are most deserving, and who should be desirous of advancement (possessing some portion of the means themselves) a farm is to be given, of a reasonable extent, on the forest, crown, or other waste lands, when inclosed, as already

* I am persuaded that in the process of time various causes would interfere, which would render it difficult, if not in many cases impossible to discriminate between the deserving and undeserving. Nevertheless, much good, with some evil, would be effected by making these qualities the criteria of advancement.

mentioned, upon producing certificates, in the manner previously described, to the Directors of the principal branch of the friendly establishment held in the capital town of each county. This certificate to be deemed a sufficient document to entitle him to a loan from the fund of three millions, (in addition to his own means, and what he is entitled to from the subscription fund), *which is actually to be expended on the cultivation of the said farm, erecting a dwelling, stocking, &c.* For the first two years he is to pay no interest for this loan; for the next three years two and a half per cent. and for the last five years four per cent. His lease to be for thirty years, with assurance of a renewal to his successor for twenty-one years, on condition of his pursuing a proper course of husbandry, to which he is to be tied down in the lease, and maintaining the same good character and conduct which originally entitled him to this preferment. For the first three years of his lease he is to be charged no rent; for the next three years the uncultivated value of the

land ; and for the remainder a very moderate rent, at least 15 or 20 per cent. under what it would let to a stranger.

The general division and inclosure of all the forests, crown, and other waste lands in the kingdom, as already mentioned, would be an occupation of many years. Such a proportion, however, might be expected to be inclosed annually as would more than supply the number of applicants of the above description. The farms, on inclosure, of course, to be divided into various sized allotments.

After the inclosure of these extensive districts, the next object of improvement is the general drainage of the Fens in Lincolnshire, Cambridgeshire, &c. &c. This is an object of the greatest importance, as the land now under water is of the most valuable kind, and immediately upon drainage capable of being converted into arable cultivation, as is fully detailed in a former part of this work. Independently of the value of the land, the water itself could be turned to the most essential benefit for the country. Be-

sides applying it to irrigation, it might be formed into canals for the more immediate communication between different districts, and the conveyance of goods, necessaries, and materials of every description, to and from the sea; and, what is of still greater importance, on these canals might be erected engines, mills, and machines of every kind that is operated by water, in the same manner as is done in that bee-hive of industry—*Holland*. This would remove a great grievance, justly complained of at present, as entailing vast injuries on the poor, viz. that from the want of a sufficient number of mills for manufactures, many of those used for grinding corn have been converted to that use, to the great inconvenience of all parts of the kingdom, and an increase on the necessaries of life more than equal to one-third of the poor rates in England.*

Here I may be asked, by what means is

* See the Proceedings of the Society for bettering the Condition of the Poor, &c.

this general drainage to be effected? Having discussed that question pretty fully in a former part of this work, my reply in this place shall be brief. The general law which is proposed to be passed for the inclosure of the waste lands, common fields, &c. and for the division of the rights and interests of individuals therein, might, with equal propriety, apply to the division of the rights and interests in the undrained lands: but without this harmonizing system, no general and effectual drainage can be accomplished. Nor does it appear to me practicable to effect it by the private funds of the individuals interested. For at this moment, after being at considerable expences in obtaining an Act of Parliament for the drainage of 300,000 acres in Lincolnshire, Cambridgeshire, and Norfolk, the most considerable part continues still in its original inundated state, because the proprietors cannot procure an adequate loan at five per cent. interest on the security of their respective estates.

Government, when commercial credit has

staggered, have come forward twice within these few years with the loan of several millions for the relief of individuals, on the security of goods in their own warehouses. If so great a benefit is to be extended to commercial men, when their own funds are inadequate to their ends, and, in its consequences, perhaps, to promote monopoly, why may not the landed proprietors enjoy a similar favour? Is the State more interested in keeping up the price of cotton, sugar, &c. than in increasing the production of the first necessary of life, and consequently lowering the price of it in the market? I therefore propose that, either out of the fund already mentioned, or by a special grant for that purpose, a sum adequate to the purpose should be voted by Parliament, on the security of the land so to be drained, at five per cent. interest, if *solely* for the proprietors' benefit: but if to be leased, on the plan already mentioned, in which there would be some sacrifice made by individuals for the benefit of the community

at large, then to be charged not more than two and a half per cent. In either case it would be a national advantage of the highest importance.

‘ Those unaccustomed to trace the effects of industry and exertion, except in small districts, cannot at once enter into the spirit and justness of calculations which include in them all the possible improvements of which a kingdom is capable.

‘ In general, the observers on the improvement of land reckon only the advantages which the *landlord* derives from an increased income: whereas, in a national point of view, it is not the *addition* to the *rent*, but to the *produce* of the country that is to be taken into consideration. For instance, if by improving our wool in quantity or quality, one million could be added to the rent-rolls of the proprietors, the farmers’ produce would be at least three millions; to which the manufacturer would add three millions more by his art—in all, six millions per annum would result of ultimate benefit to the nation. It is

thus that *internal improvements* are so infinitely superior to *foreign commerce*, in point of real advantage.

‘ His mind must be callous indeed, who feels himself uninterested in measures by which not only the barren waste is made to smile, the ocean to yield its wealth, but of which the object is to fill the desert with a hardy, laborious, and a respectable race of inhabitants, the nurseries of our husbandmen, our artists, &c.’*

I come now to the last division of my plan, viz. to place on an equal footing with the select higher class of labouring cottagers a certain portion of sober, industrious, frugal, skilful labouring mechanics, manufacturers, artificers, and tradesmen of the most useful professions to the community and the nation at large, from whom certificates are to be required similar to those from the select cottagers, giving as great a preference as is

* Sir John Sinclair.

consistent with the nature of the plan to married individuals. Single women, whose lot may place them in useful professions, are not to be exempted from the benefits of this part of the plan. The loans to be in sums of 25, 50, 75, and 100 to 300 or 500 pounds; charging no interest on fifty pounds and under. For upwards of fifty, one per cent. for the first year; two per cent. for the two next years; three per cent. for the three following; and four per cent. for the remainder of the time they keep the money; which is not to exceed ten years, for the larger sums; and five, for loans of fifty pounds and under. The principal, however, to be received by instalments, at different dates, within those periods. The whole of the loan may or may not be made at one time, according to circumstances. Bankrupts, on proving that their failure was not from any misconduct in themselves, but from accidents which it was wholly impossible to foresee, or, seeing them, to prevent, and possessing all the other requisites of character, are to be entitled to

relief from this fund. For it very often happens, that a very deserving tradesman, fighting against the caprice of fashion, and the obstruction which war and other circumstances occasion, has exhausted his means in forming a connection and establishing some regular train of trade; and at the moment that he is entering into a successful business, the impatience and clamour of his creditors produce his immediate ruin. Men of this description, whose moral habits are not vitiated, and whose nerve of industry has not relaxed, are perhaps of all others, from the *experience* they have obtained, and the *connections* they have formed, the most safe to entrust with loans (having first procured a clearance of all former incumbrances) because the most likely to be successful. Sad is the situation of such individuals at present, without friends to cherish them! A foresight of the condition into which they are going to plunge, too often, I fear, tempts them to act the knave: and it is with difficulty that persons habituated for years to act as

masters, can be reconciled to become servants, and rendered equally useful in such a station. This may be called a great weakness, but it is a weakness inseparable from human nature. How many, too, are driven to criminal pursuits, who, were such means of relief within their reach, might be useful members of society! Is it not better, then, to devise means for the prevention of crimes than to study in what manner we shall inflict a punishment for them?

How many are there, with scientific heads, with abilities of every kind, who are yet unable, from want of a small sum of money to carry into execution plans, which would perhaps be highly advantageous, not only to themselves, but ultimately to the state to which they belong! How many of the middling class of traders, who, at their outset in life, have been obliged to borrow money at enormous interest, are struggling with difficulties almost insurmountable, while feeding in luxury those pests of society, usurers and pettifogging attornies!

This part of my plan may appear, at first sight, less adviseable than the former, from the frauds and losses to which it might be subject, arising from the more corrupt habits of the inhabitants of great towns. Losses no doubt there will be many, but these will be more than covered by the compound interest of the sums lent. To such as may be of a different opinion I am happy to communicate, from the experience of upwards of thirty years, the success of a fund in some degree similar.

In the year 1746 a legacy of twenty thousand pounds was bequeathed by Mr. Samuel Wilson, of Hatton Garden, to be lent in sums of from one to three hundred pounds, to young tradesmen of good character for a term of five years; the first year at one per cent. interest, and two per cent. for the remainder. And notwithstanding some legacies were directed to be paid out of this fund, forty pounds a year to a clerk, half a guinea to each of the five trustees weekly, or oftener if required, for the expences of their meet-

ing to transact the business, &c. and relief granted to a vast number of individuals, many of whom are this day among the *most opulent* in the city of London, it has *increased one third of the original capital*.

An estate (I am informed since the preceding pages were put to press) has been also bequeathed by some benevolent individual in the county of Northampton, the yearly rent of which is lent in small sums, *without interest*, for nine years, to the freemen of Northampton and some adjacent towns: and notwithstanding the losses to which this fund was subject, yet they have been more than made up by the improved rental of the estate.

Journeyman mechanics and inferior tradesmen form at present, and will in future, the great bulk of the friendly societies; and it is not to be expected that their providence will be less hereafter than it formerly has been. Their weekly subscriptions, therefore, to the one fund would be some security for the sums issued to them from the other.

Having, in a preceding page, mentioned

the fisheries as an incalculable source of individual and national prosperity, and therefore highly meriting parliamentary aid, I am happy to inform my readers that it has at length fully roused the attention of Government; and that immediately on the return of peace the zealous endeavours and benevolent views of the British Society, and other companies of private individuals, are to be seconded by the efforts of those in power. When we consider that, to make the fisheries completely successful, so small a national object as the abolition of the *duty on salt** has been only wanted, and for which a commutation has been frequently proposed, we must be struck with astonishment at the tardiness and neglect which the subject has so long experienced.

As it must prove highly interesting to the political inquirer to trace the progress of improvement in civil life, and to a Briton in

* I have already mentioned the vast benefits which would accrue to agriculture from a repeal of this duty.

particular the improvement in the condition of his countrymen, I with pleasure refer such to the ‘ Speech of the Earl of Kinnoull to the General Court of the British Society in March, 1798 ;’* in which he will observe that, with the application of a part only of a capital of 36,000*l.* to ameliorate the condition of the inhabitants of the north-western coast of Scotland, emigration has been stopt, formerly too prevalent ; population increased ; the fisheries astonishingly extended ; an improved system of agriculture introduced ; settlements of extensive tracts formed ; villages built ; quays and public buildings erected, with other accommodations, to which manufacturers and artizans of various descriptions have been successfully invited ; implements for fishing, husbandry, and manufactures provided ; wealth and independence created where they were before unknown : in short, a spirit of enterprize, industry, and emulation excited, immeasurable

* Published by Cadell and Davies, London ; and Creech, Edinburgh. Price 1*s.* 6*d.*

in extent. And this, too, is effected without any prospect of loss to the benevolent subscribers to the fund.*

Having thus unfolded the nature of my plan, I commit it to the public, in the fond expectation that it will arrest the attention of the benevolent and enlightened part of the nation. If in a work interesting to millions, only a portion of the object be attained, the labour employed will be well applied. And it is but reasonable to hope, that the intercourse which such a system would create between the different classes of the state, would prevent emigration, improve the morals of the poor, correct some of the most profligate and abandoned ; and, by removing far from the dwelling of the wretched the possibility of want, lessen, if not prevent, the commission of crimes, of which want alone is too often the original cause.

* The mode pursued by this society in providing habitations, land, &c. to the settlers will be an additional guide to those previously quoted, in making allotments to the two classes of cottagers which I have recommended.

SCARCITY.

LORD SOMERVILLE, in his inquiry into the causes of scarcity, particularly dwells on the increased importations of grain since 1754, and this he ascribes to the more general introduction of the horse for the purposes of agriculture, in preference to the ox, which became more fashionable every year since that period. This, says his Lordship, is the real cause of scarcity. Abolish the use of that animal in agriculture, draught, &c. and you will have plenty again.

Now, as to the increased importation of grain since the above year, his Lordship is tolerably accurate; but as to making that useful animal, the horse, the sole cause of it, he is egregiously wrong. If the noble author will inquire into the state of the weather in this country from that period, he will probably find, that the seasons have been, in general, very unfavourable; oftener

three successive bad seasons than two good. To this natural cause may be added that arising from increased population, luxury, improvement and increase of stock.

In addition to these circumstances, which fully operated last year, it was suggested in a public Letter addressed to his Lordship by a Society of Practical Farmers, lately published, that *monopoly*, and not *scarcity*, was the cause of the then dearness of bread and meat. Time has since disclosed that cause to be the true one: for it is universally believed by unprejudiced men, that we have native corn sufficient, without the aid of the present season, for the consumption of the inhabitants of this island for three months. And the statements directed by his Lordship to be published of the quantity of corn in hand, throughout the kingdom, being fallacious as to quantity, increased the evil, by enabling regraters and monopolists, calculating on the regular consumption, to pursue their pernicious plans with the greater certainty.

MISCELLANEOUS OBSERVATIONS.

If I have not failed of my purpose in the preceding pages, I have certainly proved that Mr. Arthur Young possesses no correct knowledge of the first principles of rural economy, is confused in his views, is inattentive to authenticity of facts, and, notwithstanding the multiplicity of his agricultural writings, possesses no clear and distinct experimental skill in husbandry. I am concerned, therefore, to observe with what deference Lord Somerville appeals to Mr. Young's authority, and with what implicit confidence he quotes his writings.* Surely

* Into the *corrected* Survey of the Agriculture of Lincolnshire, written by the SECRETARY TO THE BOARD OF AGRICULTURE, the public might reasonably have expected that nothing irrelevant would have been introduced; but they will be woefully disappointed on perusal; except indeed it be of importance to the agricultural interests of the country to be informed in what manner Mr. Young passed his time! He must have been greatly at a loss for matter when he introduced so indecently the name of the amiable and accomplished Lord Yarborough. Because, forsooth, this noble-

his Lordship must have looked into the books of Mr. Young! And I should think it scarcely possible for any man of common discernment to look into them, without perceiving that they are utterly unfit to be quoted as authorities in husbandry:—yet has Mr. Young himself had the imprudent audacity to require of land-owners to compel their tenants to purchase his *Annals of Agriculture*.* There wanted but this to make his pamphlets utterly hateful in the estimation of farmers. What use should the farmer make of such pieces, except to add them to the dunghill?

If it were possible, his Lordship has been still more unfortunate in the quotation of the FARMER'S CALENDAR,† a Grub-street pub-

man's agents have not managed his estate agreeably to the ideas of Mr. Young, our agricultural hero wishes to see his Lordship stuck in one of his gorse-bushes!

* See a note on p. 360 of the Appendix.

† In a former part of this work I have made it evident, I hope, to the dullest capacity, that Mr. Young is grossly ignorant and erroneous on the subjects of *paring and burning*,

lication on farming ; compiled, with miserable want of judgment and inaccuracy, from the worst of all former productions upon the same subject ; such, indeed, as could be furnished only from Somers' Town or the vicinity of Moorfields.

As to Lord Somerville's idea, that his improved plough can be brought into universal use in husbandry, I shall only observe, that various soils will require various descriptions of ploughs, in different seasons, and even for one and the same farm.

On the subject of draining I have to add, that it appears to me plausible, that instead

as well as *warping* : and yet the author of this production, as an instance of his *agricultural knowledge*, implicitly adopts and strongly recommends these *fallacious* systems of Mr. Young, as the best to be pursued by farmers.

The celebrated reporter (Mr. Middleton) for Middlesex has not only quoted Mr. Young's authority in favour of the practice of *paring and burning*, but, in order to strengthen that authority, he most unblushingly introduces the *only exception* which Mr. Davis, the reporter for Wiltshire, makes against the disuse of the practice, to impress on the reader an idea of that gentleman being uniformly favourable to the practice ; an idea totally unfounded.

of complex and expensive machines, a simple one, with a horizontal wheel, may be placed, near the bank of any moving stream or river, possessing sufficient power to lift up or raise the water from the adjacent lands into its channel.

SHEEP AND WOOL.

HIS Lordship has entered much at large into the history of 'different breeds of sheep,' but he never once adverts to the source from whence the different varieties of sheep in Europe, termed '*different breeds*,' are produced. Animals in a state of nature, generally speaking, where no care is taken in selecting them, and they are left to intermix in the different districts, without interruption, characterize the soil upon which they feed, or nearly so: that is to say, upon the rich marshes of Somerset and Lincoln you will find large boney sheep, with heavy fleeces of wool; upon the mountains of Scotland and Wales, and upon the hilly grounds in different parts of England, where the herbage is poor and scanty, though sweet and wholesome, you will find the sheep small in size, their fleeces proportionably light, and their flesh delicious. When the exertions of man are applied in the different districts, the purposes of trade and commerce

direct him to select the particular sorts in each class, the wool and carcase of which, he apprehends, will bring him home the most gain; and from the manufacturer he soon learns, that an unequal distribution of food, whatever it may be, or stinting the animal in its necessary quantity, is injurious to the wool as well as to the carcase.

Although we may, by such selections as above hinted at, and by making use of those rams we most approve, of different breeds, with which to intermix the ewes of different varieties, or by changing the stock generally from one country or district to another, effect a change; yet we can have no chance of arriving at any degree of success without frequently resorting to the original sort, and breeding from that particular variety: for Nature, ever true to her own laws, will in time assimilate them to the soil on which they feed, and our ingenuity and perseverance will find sufficient employment, and, I fear, frequent disappointment, in attempting wholly to counteract or sub-

due her. Therefore, in order to make myself clearly understood, my position is this:—That animals will eternally incline to increase their size, weight, and largeness (commonly called coarseness), and in respect to sheep, the weight and length of the thread of their fleeces, when we bring them from a poor and barren country to feed more luxuriantly upon a better soil; and *vice versa*. To attempt, therefore, to extend in this country the breed of Spanish sheep beyond what our hilly districts, unfit for cultivation, can depasture, would be not only impolitic and unwise, but impracticable, without a constant importation of Spanish rams.

Hence it follows, as a matter of course, that by improving and cultivating our commons, downs, heaths, and waste lands, in order to procure a larger supply of food for man, we must inevitably diminish, and, in process of time, wholly destroy the antient sheep-walks where the finest woolled animal now depastures, in as much as these sheep-

walks are on land capable of becoming arable; and in consequence of the cultivation of turnips and manured glasses, we shall find, from the natural cause before alluded to, an equal increase of difficulty to continue the production of the fine woolled race of animals which Lord Somerville so much recommends. And may I humbly request his Lordship will have the goodness to inform the public whether he does not think it would be better even to give up a little of our manufacturing speculation, and of course the cultivation of an animal so well adapted as the Spanish sheep to look ‘starvation in the face,’ than by persevering in a plan, to support which, with any tolerable degree of effect, we must neglect the improvement of the carcase of the animal, and continue a very considerable portion of our island uncultivated and unimproved, and thereby oblige our countrymen constantly to look ‘starvation in the face?’

I am aware that, on the other side, it may be said—What! for want of being enabled

to manufacture the finest cloths, shall we be undersold in foreign markets, and our manufacturers of that article remain without wages and without bread? Granting the full force of this argument, let us not despair; we can find employment for the manufacturer by turning his shuttle into a spade, and by so doing he will produce food for four men upon the same spot which otherwise would only produce as much wool as would employ his single exertions to manufacture in a few hours.

I am not much acquainted with commercial and manufacturing concerns, but the following arguments strike me very forcibly:

That all the wool now produced in this Island finds a ready sale to the manufacturer, at a price which satisfies the landowner and the occupier.

That by introducing the Spanish breed of sheep, and mixing it with our present varieties, we shall decrease the quantity of both mutton and wool, and materially alter

the quality of the latter ; and thereby lose the means of supplying part of those markets, or those occasions, by which the present demand is created.*

That the severe duties and penalties imposed upon the exportation of wool from this country into any other, proves that the measure would be giving an advantage to our rivals in trade. Why then should we not, by parity of reasoning, take the same advantage of our rivals, by importing the raw material from their territories into this, and more especially if we can purchase it at a price by which we can profit, by returning it to their market in a manufactured state? And if fine wool be not wanted in this kingdom for the purpose of manufacturing cloth for a foreign market,

* Our continental markets appear to take off, with a regular demand, at a good price, those articles which are manufactured with heavy or combing wool. Why then support an attempt at an unlimited production of fine or clothing wools, to enhance in price the necessaries of life, by occupying the land in pasture which ought to be converted into arable cultivation?

let us content ourselves with the best clothing wool we can procure at home, compatible with the production, along with it, of the largest quantity of good mutton, at the least expence: that thus, whilst we are taking care to lay finery upon the back, we do not too much imitate the subjects of the antient Government of France, by neglecting the belly.

Let us not forget, my Lord, a truism, which, without offending, might be written in letters of gold before your Board:—

That upon any given spot of land, now in antient pasturage, whether down, common, heath, or waste, the same being adapted for tillage, under the turnip, barley, and manured grass culture, on being broken up and applied to that husbandry in rotation, more wool and mutton shall be produced, notwithstanding the crops of corn, than the same land could have been made to produce in such state of antient pasture; consequently the farmer and the community would be

gainers, clear of all expences, of the crops of corn at least.

That wherever turnips and manured grasses can be cultivated to perfection, the most valuable animals may be bred, fed, and maintained.

Surely it would be wise to ascertain the proportionate quantity of fine and heavy wool which may be wanted by our manufacturers, before we substitute the light for the heavy upon *too large a scale* ; and also the breeder and grazier should ascertain the proportion of advantage which would accrue to them from the change.

Since the preceding pages upon the subject of Spanish wool were committed to the press, a pamphlet of Lord Sheffield was put into my hands, in which I am happy to find a general coincidence of opinion upon that subject: and from the high and deserving credit which that ingenious Nobleman has with the public, a few quotations from that

work will not, I presume, be unacceptable to my readers.

‘ The increase of tillage (says his Lordship, page 42) does not necessarily decrease the number of sheep, because the introduction of turnips, artificial grasses, &c. under an improved agriculture, more than makes amends for the decrease of pasture land. When I examined this subject fifteen years ago, the number of sheep in Ireland seemed to be on the increase. It is probable that fine wool may have decreased there, but coarse wool certainly has increased.’

‘ It may also be demonstrated, that the growth of wool is greatly increased in England, and even in consequence of inclosures, which erroneously were supposed to diminish the quantity ; but the growth of fine or short wool has by no means increased in proportion to that of the coarse or long wool, and perhaps has hardly had any increase except on the Sussex South Downs, and in districts where the sheep of those Downs have been introduced, and a few other places ; but I

should conceive that the greater profit which arises from the heavy carcase of the long woolled sheep, as well as from the weight of wool, may have introduced that breed where short or fine wool was before grown.

‘ The most essential inclosures which have taken place in England were open arable land, particularly in the midland counties of England, where comparatively few sheep were before kept. A large proportion of that land has since been laid down, and now furnishes natural and artificial grasses in abundance, maintaining a great number of sheep, particularly in Leicestershire, Northamptonshire, Warwickshire, and several other counties. In the case of poor commons or waste lands inclosed, a tenth part of them, when cultivated, will maintain a much larger quantity of sheep than the whole maintained before, and of a good kind. Those kept on commons were in general a bad breed, the wool of which, though commonly reputed fine, was of a much inferior quality to what it was supposed to be: and

it is well known that the wool of ill-fed and neglected sheep becomes of a hairy thread, and that the quantity produced is comparatively inconsiderable. Wool grown on a common is always sold lower than pasture wool of an equal quality.

‘ I should observe, that the common notions of coarse and fine wool are very incorrect, especially when those terms are applied as distinctions between combing and clothing wool, in the qualities of both of which kinds there is a great difference. The animals that produce them are as distinct as the water-dog and the greyhound in respect to their covering; and the finest down or pasture in the world, although it might diminish the quantity, would not render the coarse long wool of the Lincolnshire or Leicestershire breed short and fine like the South Down wool; nor would the richest pasture render the latter of the same staple as the Lincolnshire. Rich pasture will increase the weight of the fleece of our short woolled sheep: it may lengthen the thread, but it will not

give the harsh and hairy quality of our coarse-woolled sheep.' Pages 47 to 50. sq2
 Again, page 52: 'The average weight of the short wool fleece is little more than 2lb. the weight of long wool is known to have amounted to 80lb but 10lb. is rather an high average. The quantity, however, much more than makes amends for the quality, independent of the weight of the carcase.'

Page 61. 'The improvements in agriculture, and a more general introduction of turnips, rape, and artificial grasses, have enabled the farmers to increase their stock of sheep so considerably that there can be no doubt, on the whole, it much more than makes up for the supposed decrease, by killing sheep under two or three years old.'

'England undersells all the world in those woollen articles which she now manufactures; in respect to the finer fabrics, it is only necessary to observe, that she undersells not only other countries, but Spain herself, even in the manufacture of Spanish wool, for which she pays an high price.'

The advocates for the introduction of Spanish sheep into this country go to the opposite extreme of the New Leicester and South Down amateurs. The former appear to pay their chief attention to the fleece, in neglect of the carcase of the animal: the latter to the aptitude to generate tallow. Probably both parties will be found too sanguine in supporting their particular and favourite hypotheses.

Lord Sheffield has tried the Spanish sheep in his park, in Sussex, which is ‘*fed close*,’ for a series of years, without any apparent diminution of the quality of the Spanish wool. A similar account is given of experiments made by his Majesty’s command. But we are not informed that the superior quality of the Spanish wool was preserved upon land under *an improved system of turnip and manure grass husbandry*. On the contrary, we are to understand that these experiments have only been made *in parks*; i. e. on the scanty short herbage of *uncultivated land*, which, consequently, is ‘*fed close*:’ and, to

use Lord Sheffield's own expression, '*a tenth part of the same land, when cultivated, will maintain a much larger quantity of sheep than the whole maintained before, and of a good kind.*'

Lord Sheffield, who is a close reasoner and fair calculator, did not consider it to be his interest to mix the Spanish with the South-Down, Hereford, or any other breeds; much less to introduce the Spanish wholly, because he did not chuse to 'sacrifice the carcase and to prejudice the shape of his flock:' nor would it, I apprehend, be found to answer the sheep-master's purpose to rest his interest upon an improvement of *only one of the properties or qualities of an animal*, which quality, brought to the highest point of improvement and perfection, can only be a *secondary consideration*; and especially at a time when even the manufacturer of the article of wool will not give us credit for its possessing that superior quality, when grown in England, from which alone the grower can derive any profit. The manufacturers who saw his Majesty's wool de-

clared it to be, 'to all *appearance*,' of the very first quality; and yet would not purchase it at the common price of Spanish wool. There must be something more in this than meets the eye; because had these same manufacturers gone to a Spanish merchant to purchase it, they could only have judged of its quality by its *appearance* and *feel*.

Viewing this subject in the most favourable light for the advocates of it, I do not conceive that it will be for the interest of this country to continue its parks, commons, and waste lands uncultivated, merely for the sake of growing Spanish wool, to the very great detriment of the improvement of the carcase, and preventing the increased production of the first necessary of life.

O X E N.

It is universally known that Lord Somerville is the avowed advocate for adopting the use of the ox in agriculture, to the utter exclusion of the horse. The arguments he uses in support of this his favourite scheme

are extremely plausible. His calculations are chiefly formed upon the circumstances of the ox being less subject to diseases than the horse; of course, to less risque; that the ox is kept at less expence, particularly in corn: and, lastly, that which is so self-evident in favour of the ox, and which every man's stomach will readily admit, viz. that roast beef is better to eat than raw horse flesh. His Lordship does not even allow his opponents to roast it. Thus a triumph in argument appears to be obtained in a moment, and, frequently, disputants upon the subject sit down quietly, without investigating, although not convinced.

It has not occurred to his Lordship to suggest, on the other side of the question, That the ox is not so well adapted for brisk and active business upon a farm as the horse.

That as the horse moves quicker than the ox, you must, in the cultivation of a farm, have a greater number of ox-teams than would be necessary of horses; consequently you must employ a greater number of men,

And this greater number of men required for the ox teams demand more wages, and consume more food, without rendering the farmer any adequate or additional benefit.

That the price of manual labour is every day increasing with the increased price of the necessaries of life.

That the horse consumes less provender than the ox, although the latter feeds on food of an inferior quality; and therefore the difference in quantity of food amply makes up for the difference in its quality,* as applied to the number of each required to perform the same quantity of work in the

* It does not exist in fact, that those farmers who keep an improving stock of young horses give them corn, except at particular seasons, when their service is extremely hard, or their provender of very inferior quality; carrots, and even turnips, are profitably given to working horses, in Norfolk and Suffolk, mixed with chaff. The county of Cambridge, with a few other districts, are exceptions, where the folly of the farmers lead them to pamper and fatten their horses, in as much as it is dangerous for passengers to pass them on the public roads when drawing the corn to market.

same period ; for the same sized farm will require one-third less of horses than of oxen.

That young horses, which are not very hard worked, require, and actually receive very little corn. *

That upon cold, clayey, or strong loamy land, at particular times and seasons, when certain operations in farming must be necessarily performed, the treading of the horse is far less hurtful to the land than the poaching of the ox, on account of his possessing less animal spirits, his motion being slower, his carcase heavier, and the construction of his feet rendering them more penetrating.

That from the injury the soil may unavoidably receive from the treading of the ox, the land, if in a moist condition, cannot be entered upon for agricultural purposes with oxen so soon as it may with horses, by several days ; consequently not only a con-

* I never knew a Norfolk farmer allow a horse more than one bushel of oats per week, at the hardest labour, instead of a peck per day, as mentioned by Lord Somerville.

siderable part of the labour of the oxen and ploughmen, &c. is lost, but also their maintenance ; and another very material delay is thereby occasioned, viz. *of the season* ; which, in cases that frequently occur in husbandry, never can be retrieved.

That the horse, bought in from two to three years old, improves in growth and value till he is five or six, when he will be perfectly adapted for the purposes of trade and luxury, and may be then sold to great advantage.

That by thus employing young horses for agricultural purposes, we relieve the soil from the maintenance of a large portion of unprofitable animals, (because if not so employed they are idle) at a time when they are too young, and wholly unfit for their ultimate destination,—for hunters, for the army, gentlemen's carriages, hackneys, drays, &c.

That by the most experienced waggoners in England it is ascertained, that the ox is not so well adapted for travelling long jour-

nies, or so well calculated for the accommodations afforded, whilst travelling, at inns upon the road, and particularly in towns, notwithstanding all that has been asserted by his Lordship in favour of the Portuguese practice.

That the breeding and employing of horses (with the intention of selling them when mature) for all the purposes for which animals of pleasure, draught, and burden are required, has, in Yorkshire and in several of the northern counties, been the chief source of the farmer's profit.*

That such horses have generally, in times of peace, been exported into foreign countries to very great advantage; and have, in days of great plenty, when provisions were low

* It has not yet been contended, that for the general purposes of agriculture the ox is stronger than the horse, because in practice it has commonly occurred, that where oxen are in continual use, a larger number of them are employed for the different agricultural purposes, as at least three to two, than of horses in other districts of a similar soil. But this circumstance I leave out of my statement altogether.

in price, been the happy medium for converting some part of the superabundant produce of Britain into articles of luxury to foreigners, at a high rate.

And that upon the conclusion of the present unfortunate war, from the enormous destruction of horses which it has occasioned, upon the Continent the demand for that animal is likely to increase to a greater extent than at any former period.

The horse may be wonderfully improved, without any additional expence, and with a due observance to adopt the particular sort of horse to the most profitable uses on various soils in cultivation. Varieties of horses may be produced, first, answering all agricultural purposes, and afterwards abundantly to supply every purpose of profit, convenience, and luxury.* Under a due and rapid cultivation of forests, commons, waste, and at present unproductive lands, with the

* Except the present cat-legged horse for racing.

blessings of peace, we may *possibly* again want that medium for exporting the produce of our soil before alluded to; if not, I have pointed out the least expensive mode of producing a supply of those animals for our own purposes: and however 'roast beef' may be better to eat than horse flesh, Lord Somerville must find other arguments beyond those he has already hit upon, to convince me, and some other obstinate men, that the horse shall be wholly banished from our farms, and that a due mixture of horses and oxen in our farming labour will not be more profitable than the separate use of either.

These considerations should, I presume, have been impressed on your Lordship's mind when discussing this subject. For what purpose you have introduced in your book the modes practised in Portugal and France, I know not, for they convey no useful information to this country.

I shall conclude this branch of the subject with the following statement;

THE following rough calculation of profit and loss between the respective keeping of oxen and horses for the cultivation of a farm of a given size, which employs twelve horses to perform the necessary labour thereon (under all the circumstances herein before recited) and would require for the same work eighteen oxen. This statement is taken for the term of three years.

HORSES DR.		L. s. d.	
Twelve horses, at 20l. per horse		240	0 0
Loss of one horse	- -	20	0 0
Balance of profit	- -	111	10 0
		371	10 0
OXEN DR.		L. s. d.	
Eighteen oxen, purchased in at 12l.		216	0 0
Extra manual labour more than necessary for twelve horses, being one man and two boys,—moderately charged at 40l. per annum	-	120	0 0
		336	0 0
PER CONTRA.		L. s. d.	
Eleven horses, sold out at 31l. 10s.		346	10 0
One sold out at 25l.	-	25	0 0
		371	10 0
PER CONTRA.		L. s. d.	
Eighteen oxen, sold out at 18l. each		324	0 0
Balance of loss, by employing the ox	-	12	0 0
		336	0 0

The expence of the keep of each, as I have already mentioned, I consider to be equal in value though not in quantity, and therefore not necessary to be introduced into this statement.

From the result of the foregoing statement, it must necessarily appear, that the most economical plan for cultivating our soil to the greatest advantage, and providing food for man, and raising horses for the purposes of trade and luxury with the least waste, and at the least expence, will be, to employ, upon soils to which they are respectively best suited, *young horses* and *young oxen* in all the departments of agriculture, *for that interval of their growth at least*, when they would otherwise remain an idle incumbrance upon our soil.

INCLOSING.

THIS being a subject of the highest agricultural importance, and the proceedings under acts of Parliament having been recently much agitated, as I apprehend, without due consideration, I take the liberty of offering to the public the following observations upon Resolutions respecting the inclosure and improvement of waste lands, communicated by the House of Commons to the House of Lords on the 19th of May, 1800, and which were ordered to be printed on the 26th June.

Resolved, That in order to diminish the expence of bills of inclosure, it may be expedient that regulations should be adopted by the two houses of Parliament, for the admission of affidavits, authenticated by the certificate of one or more Magistrates, as sufficient evidence of the notices, the consents, and the allegations in the preamble of such bills, instead of the parole evidence now required ; unless where the latter should ap-

pear at the time to be necessary from particular circumstances.

‘ Resolved, That, for the same purpose, it may be expedient that a general law should be passed, comprizing all such provisions as by experience have been found necessary in most bills of inclosure; to which all such bills in future might refer.

‘ Resolved, That, in order to diminish other expences incidental to bills of inclosure, it may be expedient, that provision should be made in such general law for taxing the charges of the Solicitor, regulating the conduct of the Commissioners, and preventing any unnecessary delay in carrying such bills into effect.

‘ Resolved, That in the case of small inclosures, not exceeding three hundred acres, it may be expedient to provide, that such bills should be considered, as to the payment of fees, only as single bills; and that those for the inclosure of smaller tracks of land, not exceeding one hundred acres, should be subject only to the payment of

half the bill fees due on a single bill: the admeasurement in both cases to be proved in the same manner as is proposed by the first resolution regarding notices and consents.'

With regard to the first resolution, every man conversant with the nature of the business of an inclosure must lament the expence of obtaining consents, &c. yet, at the same time, a relaxation from the mode already pursued might open a door for more serious inconveniences, both to individuals and the public, than at present exists, as will more readily appear in the further consideration of this subject. It is an evil that will, in a considerable degree, cure itself, because the prejudices which subsisted for a series of years past, against the measure, amongst the lower order of proprietors, is every day wearing away; and therefore it is reasonable to conclude, that when the Solicitors of an inclosure act shall inform them that their coming forward at a public meeting, for the purpose of signing their consents, will be attended with a considerable

saving, their appearance, at the time and place fixed, will be a matter of certainty.

As to the proof of the allegations of the preambles of bills, I presume that both houses of Parliament will see the necessity of so far guarding the rights of the subject, as to require direct and positive proofs to be continued to be adduced at their respective bars; an expence of no considerable importance when compared with the object attained, and when the means of obtaining it are properly pursued.

With regard to the second resolution, save and except some certain formalities after the preamble to an inclosure bill is disposed of, a general law, comprizing provisions, &c. for regulating future inclosure bills, would probably be found as inapplicable, unnecessary, and improper, as a general law for the future cultivation of the lands to be divided and inclosed. Those persons who are most in the habit of carrying inclosure acts into execution, are well aware that they are already *too general* and voluminous, being

commonly stuffed with many clauses which, to say the best of them, are inapplicable, and often unnecessary ; whilst others might have been introduced in their stead, which would have tended to the interest of the respective proprietors in the highest degree.

Inclosure bills have been generally obtained by the superior activity of Solicitors in procuring their clients' consents ; and as one of the material objects in their view is the emolument of the office of Solicitor and Clerk to the Commissioners, a bill is cooked up in the most expeditious way, without a due, *competent*, and *deliberate* investigation of all the circumstances attending the property to be divided and inclosed.

Suitable remedies might be suggested and legalized for the removal of all local impediments and defects ; not only promoting thereby the permanent interest of the particular parish or district immediately under consideration, but also improving, in many situations, the adjoining parishes and dis-

tracts already inclosed, with respect to more effectual drainages, irrigations, and other improvements, the benefits of which would be immense. Surely these objects, which ought to have been more particularly within the view of the framers and supporters of these resolutions, will not be best promoted by opening a door for more *compact*, *confined*, *secret*, or *summary* proceedings in obtaining inclosure bills.

Upon the best view of this subject it will appear, that the necessary clauses of a proper inclosure bill are of *a local consideration*, and therefore any *general* law respecting them would, in a great measure, be unnecessary.

With regard to the third resolution, it may be necessary, in order to elucidate its several subjects, to enter into a full consideration of them in all their forms and bearings, which would greatly extend beyond the limits which I have prescribed to myself in these pages.

I presume that, as the Solicitor's charges

are made up for proceedings which are commonly known and understood by the parties interested or concerned in inclosures, it would be no difficult task to examine a few experienced professional men at the bars of both houses of Parliament, whereby a table of allowances might be settled, in two hours, upon which the subsequent charges of Solicitors or Clerks to Commissioners might be grounded, and prevent the parties from future litigation and trouble.

An inclosure bill is generally a mass of incongruous orders and directions; rendered so, in a great degree, by the hasty mode in which they are composed, and not a little promoted by jealousies, and party, or electioneering schemes, which too commonly subsist between the proprietors. Difficulties are but too frequently created by a certain description of meddling agents and attornies, who, in order to get employed, or piqued that they were overlooked in the first instance, are induced to create them; and thus their ingenuity is put on the rack to invent

clauses, under colour of guarding the particular interests of their respective clients in certain instances, which are often inserted, and others more beneficial struck out. Therefore, when the Commissioners meet, to proceed upon the execution of an inclosure act, of the clauses of which they are wholly ignorant, and come to lay the variety of them together, they find them insufficient for all the necessary purposes of improvement, for they cut and operate against each other. The extreme inconvenience and delay of the interests of the parties, from these circumstances, are immense.

The Legislature having for its object the protection of the rights and interest of the lowest as well as of the most exalted proprietor, has, from time to time, enacted that public notice, from the Commissioners to the proprietors, should be given of their different proceedings, and of the times and places when and where they may either appeal to them, or against them. And in

order to elucidate these subjects, it may not be improper to enumerate some of the proceedings, for which from ten to twenty-one days' notice are generally given of appeals, &c. viz.

1st. Notice for receiving claims:—and should the claims not be delivered at the first meeting, a second for such purpose is generally held.

Such claims (the whole being received) are commonly directed by the act to be published.

2dly. With timely notice for receiving objections. Such objections being published, notice is then given for the parties to come forward with evidence on both sides.

Notices are also required to be given when the lines of the public roads are staked out, and a meeting appointed for hearing objections to such public roads, &c. In fact, three-fourths of the public meetings for carrying into execution an act of inclosure, are expressly occasioned by a strict adherence to

some of its clauses, perhaps wisely intended by the Legislature, in order to prevent any undue influence of powerful proprietors operating upon the Commissioners, to induce them to allow a march to be stolen upon the interests of those who are less vigilant, or less powerful. When, from the difficulty of producing evidence on the part of the proprietors, or of determining upon claims on the part of the Commissioners, or from riots, quarrels, and disputes among the proprietors, delay and expensive, tiresome proceedings are occasioned, they are charged upon the Commissioners,* and imputed by the illiberal and uninformed, to wilful delay and neglect on their part. The office of a Com-

* It may not be unworthy of observation, that those who have been the loudest in exclaiming against the increased expences of inclosures have themselves augmented them, by employing two Solicitors in passing inclosure bills where one was only necessary; and who have not availed themselves of the advantages to be derived from inclosing, by erecting proper and necessary buildings and fences, whereby their estates might be occupied to the greatest advantage.

missioner is chiefly a mental, not a corporeal employment; and the Legislator, who suggested that Commissioners should be employed a given number of hours per day, was not aware how such employment was to be found them; that is to say, how, at any of those meetings, held expressly by legislative authority, for the purpose of receiving objections to the proceedings, or for hearing appeals against the acts of the Commissioners, shall they employ themselves *when no such objections or appeals shall be brought forward*, which is frequently the case? Those persons who are conversant with the business of Commissioners under inclosure acts well know, that there are no proceedings under any one act which will not admit of their attending to those of more than one in any given day.

The limiting Commissioners from acting upon more than one inclosure in a day would be subject to the following objections, amongst many others, too tedious to enumerate for the present purpose:

1. That the most experienced men would,

from the nature of the proceedings already explained, even when attending inclosure meetings, be at least half their time unemployed.

2. From the foregoing circumstance, local men, less experienced, would be let into an employment for which they are less qualified; and such men being too much in the habit of living with the parties interested, would enter more readily into their views and opinions, and consequently be too apt to indulge them in obtaining whatever they require, however injurious to the interests of others. Men who are in the habit of acting generally as Commissioners are by far the most desirable for that appointment, when its objects are considered as extending no further than a fair and equitable comparative valuation of the original properties, and an equal distribution and division of the new. There are many local men who would be excellent Commissioners if carried fifty miles from home, where they should know neither the proprietors nor

their property. In making this observation, I request to be understood as placing the objectionable part of it more to the fallibility of human nature than to particular persons.

3. It would be depriving men who have devoted their whole time, for a series of years, to a particular pursuit, from deriving the same kind of emolument from their matured experience which is common to mere mechanics in the division of their labour. This would be a measure, as I conceive, extremely unjust, improper, and unwise. With more propriety might a law be enacted to prohibit a pleader of causes from holding more than one brief, or of taking more than one fee in any one day ; because the cause in which the lawyer might be concerned could come on but *once* : for one moment's neglect, inattention, or delay on his part, as far as his client's safety or prosperity depended on that particular case or trial, might ruin him for ever. On the contrary, the

business in which the Commissioner is engaged being procrastinated or delayed by his engaging in too much business, carries against him not much more than a charge of putting a paltry fee of two guineas into his pocket, for which he may not, in the opinion of the narrow-minded, have sufficiently laboured, the contractedness of whose souls might never have permitted them to observe that, in truth, the office of Commissioner is, as before observed, rather a mental than a bodily exertion, and that one bright suggestion, the result of matured experience, grafted upon common sense, or the timely resistance or prevention of one interested or oppressive movement, may entitle modest, unassuming men to more honourable consideration than all that certain clamorous, time-serving, interested, or *reforming* proprietors can bestow.

With regard to *labour* and *time* to be employed in the mere act of valuing land; after a datum or first principle is fixed for the first consideration of quality, all the remainder is

mere comparative estimation, in performing which the most firm and active mind cannot preserve its vigour in actual employment for more than a few hours in a day; I may venture to say not more than six or seven; afterwards the clayey and the sandy are viewed with an equal eye. Who then shall prescribe the length of precise time in which two or three men of various capacities of body and mind shall continue to act together with equal vigour for the benefit of that concern in which they are equally pledged to take a part?

4. It would be reversing the common practice observed towards men in offices of public trust and respectability, which has stood the test of the refined wisdom of ages, because there is no plan devised by these reformers, under their proposed regulations, of increasing the fees of Commissioners at a time when their expences are unavoidably double what they formerly were when the fee of two pound two shillings per day was

established : on the contrary, their *wisdom* leads them to suggest, and the Legislature is called upon to pass a law to increase a man's activity and vigour, by withholding from him a proper remuneration for his exertions.

The Legislature is called upon in order to increase the respectability and secure the honour, integrity, and independent spirit of Commissioners by the like means ; and also by assuring them with every possible proof that ingenuity can invent, that they are considered merely as a necessary evil, and entitled to no share of confidence which can possibly be withheld.

Since there are some dishonourable men in the world, possessed of extensive landed property, mixed with the property of others, it may be expected, and it does sometimes occur, that such proprietors seek for and appoint to the office of Commissioner such persons as are most likely to attempt, and persevere in their views

to carry a favourite point. But generally speaking, the office of a Commissioner upon inclosures is such as is best conducted by men of great and universal practical knowledge, possessing high and independent spirit, who, in the execution of that office, regard the interest of the proudest Peer and the most abject cottager as objects equally entitled to their protection. The confidence which must necessarily be placed in them, as far as it goes, in the equal distribution of property from thirty to two or three hundred thousand pounds value, is much greater than that which can possibly be placed officially in the hands of a judge of the law, because his province is merely to expound it to a jury. The Commissioner is judge and jury between the parties in every cause, and corruption on their part, to a certain extent, might be committed without detection. It is absurd to think of placing any second persons behind them, to develope or inspect their conduct, because such second persons

would, by such procedure, virtually become the actual Commissioners ; and therefore it would be better to appoint them as such in the first instance, because if decision be not lodged and fixed in some point, you may go on *ad infinitum*.

The ‘ *Regulating the conduct of the Commissioners,*’ a principal feature in the third resolution, demands much consideration ; and in a case where the rights of individuals, from the highest to the lowest, are so materially concerned, too much caution cannot be employed, because any particular controul of their conduct has a tendency to throw undue influence into the hands of the principal proprietor or proprietors, which will be likely to operate to the injury of the lower order of them. And I will be bold to assert, that the power of appeal to the General Quarter Sessions, without its decisions being subject to the controul of a superior Court, is likely to produce that effect.

In order to define this point a little more,

it is necessary to take a view of the Bench of Quarter Sessions, particularly in small counties, to see of whom it is generally composed ; in which consideration I put all legal sagacity out of the question ; we do not need it in the present case.

Since the independent country Squire of moderate fortune has been annihilated, from causes unnecessary here to develope, it is generally composed of those, who, of all others, the learned and noble President of a great house will probably tell us, when this subject shall be again agitated, ought not to be entrusted with a decision upon any part of it,* not because they are, truly speak-

* Mr. Justice Blackstone, upon this subject, delivers himself as follows :

‘ The impartial administration of justice, which secures both our persons and our properties, is the great end of civil society. But if that be entirely intrusted to magistrates, or select body of men, and those generally selected by the Prince, or such as enjoy the highest offices in the state, their decisions, in spite of their own natural integrity, will have frequently an involuntary bias towards those of their own rank and dignity ; it is not to be expected from

ing, the most unlikely of all men in society to understand it, having been brought up and educated in other pursuits, but because it frequently occurs that one of their own order is immediately involved in the disputes upon this subject which comes officially before them, as well as the interest of their immediate patron or patrons in expectation. At the same time I am disposed to give those gentlemen as much credit for the purity of their intentions as the learned Judge * allowed the jurymen of Kent, in the case of the King v. Waddington.

And in order that 'justice may be ad-

human nature, that the few should be always attentive to the interests and good of the many.

'Every new tribunal, erected for the decision of facts without the intervention of a jury (whether composed of Justices of the Peace, Commissioners of the Revenue, Judges of a Court of Conscience, or any other standing magistrates) is a step towards establishing aristocracy, the most oppressive of absolute governments.

'The administration of justice should not only be chaste, but should not even be suspected.'

* Lord Kenyon.

ministered in the best and purest manner possible,' I submit to the good sense of the public, whether the proceedings of Commissioners, in the execution of an inclosure bill, ought at any rate to be referred to the controul and absolute decision of the magistrates at a Quarter Sessions, much less that their powers should, upon the present occasion be enlarged : for, whether the lordly land-owner is sitting upon the bench, arbitrarily deciding upon questions wherein his own particular rights and interests are concerned, or whether he is virtually represented there by his mere dependents, constituting a majority of the judges, makes but little in the account ; and whether, under all the circumstances of this case, the adopting the present resolutions would not have a tendency rather to delay than to facilitate a more general inclosure.

THE following remarks upon the errors which have crept into the practice of inclosing, although generally mentioned in my Review of Mr. Young's Report, I conceive necessary to introduce here more in detail, to impress landed proprietors with the necessity of attending more than at present to the *shape* and *form* of allotments, as a means of recommending it to legislative attention.

It is very well known, that the common directions to Commissioners under acts of Parliament for inclosures are, after setting out various parcels for lords of manors, and others, for stone, gravel, and clay pits, compensation for tythes, &c. &c. to allot the residue among the several proprietors and persons interested therein, *quantity, quality, contiguity, and situation* duly considered. But this practice of Commissioners has frequently been followed by much evil; sometimes from their mistaking the intention of the Legislature, or the meaning of the term *contiguity*; sometimes from not understanding the most profitable uses to which the respective allot-

ments might be applied after the division and inclosure. It also sometimes proceeds from their not forming a true comparative estimate between the benefit to be derived from setting out *square* or *compact* allotments, with a view to the building farm houses in central situations, in preference to the preserving a connection of the allotments with antient farm-houses and buildings in outside or remote situations of a parish, where a variety of interests are crowded together, and where the allotments of all the proprietors, and particularly those of the most considerable, to whom squareness and compactness ought to be the principal object, are extended in narrow stripes to a great distance from the ancient buildings.

The general practice is not only in favour of the latter procedure, but, where a parish consists of soils of different qualities, goes farther into the practical error of allotting to the same proprietor (whose whole interest would amount to no more than a moderate

sized farm) various parcels, that he may have a little of all the different soils of which the land consists; a method by which the expence of fencing is increased, and the possibility of compactness prevented altogether. Besides, a proprietor of this description of property not having a sufficient quantity of any one species of soil to enable him to adopt that system of husbandry, and course of cropping, to which it is best adapted, without being obliged to divide his parcel into mere modicums, he is left in the condition of a mariner at sea without a compass to guide him, or a rudder to steer by.

Estates thus laid out, when considered as locked up in mortmain from any future alteration, on account of the intermixture of college and church lands, the property of lunatics, minors, trustees, &c. &c. are rendered of less value, than if no division and inclosure had taken place; for had the land remained in the state of common, or open field, the good sense of the community would sooner or later have contrived and adopted

a more beneficial and profitable mode of allotting and dividing them.

In justice to the public, regardless of the comments and observations of many Commissioners of the old school, who will join in condemning me for the supposed temerity of my remarks, I freely, and in terms unqualified, declare, that in dividing and inclosing landed property, there is no practice so beneficial as to lay out each allotment for a farm as compact and as square as possible, that the proprietor may be induced either to build, or to remove his buildings to its centre, which will, in almost every case, tend to his present and future advantage.

I am well aware that the contrary practice will have many advocates. It will be particularly countenanced by those who have been for a series of years in the constant habit of persevering in it, and whom, as a Commissioner of no inconsiderable practice, I have constantly opposed, and endeavoured to convince, though without the success de-

sired, as I well knew from calculation and experience, that an occupier of a square farm of arable land can better afford to pay high interest for all the expences of erecting buildings in its centre, than if he were to have the same buildings provided for him, without any additional expence, upon any part of the outer lines of that square; for, by having his house and farm-yard in a situation so convenient, a great deal of labour would be saved. How much more then must it tend to his disadvantage where his buildings are situated at one end of a farm, laid out in the form of a parallelogram, whilst the other end is extended two or three miles from his dwelling.*

* The squareness and compactness of allotments, and the placing the buildings in central situations, will very much favour the cultivation of bees. The advantages to be derived from these industrious little animals are immense. 1. By their roving from blossom to blossom, they greatly forward the fructification of plants; 2. their honey, medicinally and domestically appropriated, contributes both to our health and conveniency, and might, if cultivated as largely as circumstances would admit, and brought into fashion, be

Should the advocates for that mode of allotting farms which I deprecate, urge that they are induced to the practice on account of the dearness of all building materials, and the expence of erecting new buildings, let them recollect, *that the expence of daily labour increases in a larger ratio.*

I can from calculation and experience ever defend the position, that a farmer who occupies an arable farm, with the house and

a considerable substitute for butter, and thereby allow a greater portion of our soil for the cultivation of corn.

This subject is worthy of the most profound attention; the purposes to which the wax may be applied I need not here enumerate; suffice it to say that we pay hard money for its annual importation, as well as for tallow, which a general cultivation of bees would in a great measure supersede. The refuse of the whole product might be very profitably converted into a wholesome and pleasant beverage, called *Mead Wine*.

I am informed by a man of respectability, who is deserving of credit, that he rents a house and a small piece of ground at Kentish Town, near London, at thirty pounds per annum, (a place not famed for gardens) where he has for many years cultivated bees; from which he has derived an annual profit amounting to from three to four hundred pounds.

necessary outbuildings in its centre, can afford to pay double the rent of him who occupies one of the same quality and quantity of land, situated as before described, with his buildings at one end of the narrow parallelogram.

Squareness or compactness of allotments may in all cases be effected upon a division of a common or common field, even where the public roads may be set out in unfavourable directions. It may be done by means of one or more occupation roads, for the convenience of particular proprietors to whose share side or distant allotments may fall. And where a parish consists of various soils, the proprietor who is intitled to a considerable quantity, may conveniently have farms set out in different situations, so as to receive a due proportion of each soil.

In certain cases, near large towns, &c. where meadow or pasture land is extremely desireable, the application of general rules may be very difficult, and perhaps unnecessary. But for the most part, by adopting

the plan I recommend, the cottagers and small proprietors will have their allotments laid out in situations near their houses and cottages, upon soils which are generally best adapted for being laid down for pasture, the state most desirable for them.

And if the land is *duly valued* according to *quantity, quality, contiguity, and relative situation*, he who shall have his farm laid out upon a clayey soil will, upon the inclosure, partake of an equal proportion of benefit with him whose estate shall be fixed upon one that is in more general estimation. Save that, in every particular instance, when expedient, a small portion of clayey land shall be allotted to the proprietor whose most general estate shall be sandy, to afford the means of improvement, and *vice versa*.

In all parts of England may be found farmers for every description of soil, at a rent proportionate to the benefit expected to be derived from its occupation.

This is not the first attempt I have made to convince the public of the benefit that

might be derived from a due attention to this particular practice. In my publication in 1787, upon the general benefit to be derived from the inclosure of common fields and waste lands, this improvement was first suggested: notwithstanding which I have had the mortification of since seeing landed property injured by the contrary practice, and a loss sustained by individuals, to say nothing of the community, of some hundreds of thousands of pounds.

After a due consideration of the importance of this subject, will not every man of common sense immediately conclude, that they whose pretensions to experience can only be derived from the long continued exercise of error, they who are wholly unacquainted with the best *practical* husbandry of the most improved counties, husbandry that has been tried and sanctioned by the test of experience, cannot be competent to estimate the value of soil in its present state, much less to judge of the advantages to be derived from the change of its condition in

consequence of a division and inclosure? With equal probability of success might we expect a skilful operation in a critical case of surgery to be performed by an ignorant empiric.

It is to be lamented that acts of inclosure are frequently solicited and obtained, the clauses of which are drawn from mouldy precedents, found in the glass-case of a country Solicitor; precedents that in no one point apply to the removal of the various local impediments to improved agriculture, or to the promoting of the advantages to be derived from situation. Parishes are frequently so differently situated and circumstanced, as to their capability of improvement, that with equal justice and propriety might the terms and conditions of the legacies and bequests found in the will of one man be applied to that of another.

A CURSORY EXAMINATION

OF

THE BILL.

ENTITLED an ' Act for consolidating in one act certain provisions usually inserted in acts of inclosure, and for facilitating the mode of proving the several facts usually required on the passing of such acts,' which passed the House of Commons, and was sent to the House of Lords, where it was ordered to be printed on the 23d of July, of the present year, but was afterwards rejected.

It is evidently not the production of practical knowledge or of acute discrimination. Amongst a variety of objectionable matter, it will be sufficient, in proof of my assertion, to enumerate the following:

' And whereas disputes or doubts may arise concerning the boundaries of parishes and manors to be divided and inclosed, and of parishes and manors adjoining thereto, be it therefore enacted, That the Commissioners appointed in or by virtue of any such

act shall, and they are hereby authorized and required by examination of witnesses upon oath, (which oath any one or more of such Commissioners is hereby empowered to administer), and by such other legal ways and means as they shall think proper, to enquire into the boundaries of the several parishes and manors ; and in case it shall appear to such Commissioners that the boundaries of the parishes and manors are not then sufficiently ascertained and distinguished, such Commissioners shall, and they are hereby authorized and required to ascertain, set out, determine, and fix the same respectively, and after the said boundaries shall be so ascertained, set out, determined, and fixed, the same shall, and are hereby declared to be the boundaries of such parishes and manors, subject to an appeal to the Quarter Sessions.'

The extent of the foregoing clause goes merely to the ascertaining and fixing the legal boundary of the parish or district in-

tended to be inclosed ; it does not go to the extent of exchanging lands between those parishes and others adjoining to them, with a view to cut the (generally irregular) respective boundaries straight, and thereby immensely to save fencing. It is well known that in the division of parishes there are frequently brooks, or small streams of water, which might often be turned to great agricultural advantages to the respective districts under a judicious disposition of them, if comprehensively considered by all the parties interested, previously to the framing of an inclosure bill:—first, promoting general and particular drainages ; next, irrigations, canals, &c. What general bill could possibly reach all the ramifications into which this subject may spread ?

‘ And be it further enacted, That all incroachments which shall have been made upon any commons and waste lands within the space of twenty years next before the passing of such act, without any legal

grant or authority for that purpose, shall be deemed part of the commons and waste lands to be divided and inclosed by virtue thereof, and the same shall be divided and inclosed accordingly : Provided, nevertheless, that all and every such encroachments shall be allotted to the person or persons who shall at the time of making the allotments be in the possession of such encroachments, or in the receipt of the rents and profits thereof.

This clause does not provide any necessary approbation of the Commissioners, or consents of parties, as to the particular situations of encroachments ; but is compulsory on the part of the Commissioners to allot the land encroached to the encroacher : so that if a cottager has encroached a piece of ground at any distance from his habitation, however inconvenient his continuance of it might be to himself, in comparison with land of the value of it to be allotted to him at his door, or to any other proprietor, the Commissioners would be compelled, by the directions of this act, to allot it to the encroacher,

and also *to provide him a road to it*, which, in many cases, would probably cost the proprietors at large ten times more than his allotment would be worth.

‘ And be it further enacted, that a true, exact, and particular survey, admeasurement, plan, and valuation of all the lands and grounds to be divided, allotted, and inclosed by any such act, and also of all the messuages, cottages, orchards, gardens, homesteads, ancient inclosed lands and grounds, within any such parish or manor, shall be made and reduced into writing by such Commissioners, or by such other person or persons as they shall nominate and appoint, as soon as conveniently may be for the purposes of such act, and the number of acres, roods, and perches, in statute measure, contained in all the lands and grounds directed or authorized to be divided, allotted, and inclosed, and also in all the ancient inclosed lands, grounds, and homesteads aforesaid, and of each and every proprietor’s distinct property in the same respectively at the time of making such

survey and admeasurement, shall be therein set forth and specified; and that the said survey, admeasurement, and plan, shall be kept by such Commissioners; and the person or persons who shall make such survey, admeasurement, plan, and valuation, and verify the same upon oath, at any meeting to be held after the making thereof, (which oath the Commissioners or any one of them are and is hereby empowered and required to administer), *and the proprietors and their respective agents, and all persons interested therein, shall, at all seasonable times, have liberty to peruse and inspect the same, and to take copies thereof and extracts therefrom respectively.*

The preceding clause would give the proprietors an opportunity of at least interrupting the Commissioners in the progress of the business, and tend to create delay and expence, because every proprietor would have equal authority to inspect maps, and take copies and extracts: so that in cases of large districts, where property is equally divided, the first twelve months after plans are made

they might be constantly taken up by the proprietors, and defaced, and thereby rendered wholly unfit for the purposes of geometrical division. In other cases, proprietors of extensive property and their agents would, for these purposes, have the most frequent access to the Commissioners, and thereby sometimes create undue influence, and always the jealousy of the lower order of the proprietors. Would not this clause have stood better in the customary way, to withhold the inspection of the plans without the Commissioners' consent, till the latter delivered two copies with their award?

‘ Provided also, and be it further enacted, that nothing herein contained shall authorize such Commissioners to hear and determine any difference or dispute which may arise, touching the right or title to any lands, tenements, or hereditaments; but such Commissioners shall assign and set out the several allotments directed to be made unto the person or persons who at the time of the division and inclosure shall have the actual

seizin or possession of the lands, tenements, or hereditaments in lieu or in right whereof such allotment shall be respectively made.'

This clause directs the Commissioners to allot to the parties *in possession*, in cases of disputed titles. Surely it would have been more for the interest of the party ultimately entitled that a summary plan had been devised for determining upon titles before the Commissioners should allot; because cases may frequently happen under this clause, where persons actually entitled to disputed property, would lose a great portion of the value of their estates for want of that compactness and consolidation with their other property in the same parish or district.

'And be it further enacted, that such Commissioners, in making the several allotments directed by any such act, shall have due regard as well to the situation of the respective houses or homesteads of the proprietors, as to the quantity and quality of the lands and grounds to be allotted to them

respectively, so far as may be consistent with the general convenience of the said proprietors, and that such Commissioners in making the said allotments shall have particular regard to the convenience of the owners or proprietors of the smallest estates in the lands and grounds directed to be allotted and exchanged.'

Would it not be advisable that Commissioners should be directed to allot estates *squarely* and *compactly*, for reasons already herein enlarged upon?

• And be it further enacted, that if any person or persons shall think him, her, or themselves aggrieved by any thing done in pursuance of any such act, then and in every such case (except in such cases where the orders, acts, and determinations of the Commissioners are by such act directed to be final, binding, and conclusive upon all parties) he, she, or they may appeal to the General Quarter Sessions of the Peace which shall be held for the county or district within which the lands to be inclosed are situate.'

If an appeal to the Quarter Sessions should be deemed necessary, would it not be advisable to *define* and *explicitly* declare by the act the particular cases wherein the orders, acts, and determinations of the Commissioners shall be *final, binding, and conclusive* upon all parties?

I am happy to observe, by a publication put into my hands since the preceding pages were committed to the press, that the Patriotic Society at Stockholm has adjudged a premium to a farmer who had quitted the exterior of his farm, and built for himself a house, with suitable offices, in the MIDDLE of it; a practice I have for a long period strongly enjoined.

FINIS.

NEW PUBLICATIONS.

BY G. LAWTON, NO. 10, STRAND.

It is applied to the Quarter Session.

A Letter from the Hon. the Lord Chancellor, dated 10th May 1844.

one of the most important documents of the day.

Plans and Specifications of the proposed new system of the

played in the various parts of the country.

Young men, and other persons of the County.

Secrets shall be kept, drawings, and remarks.

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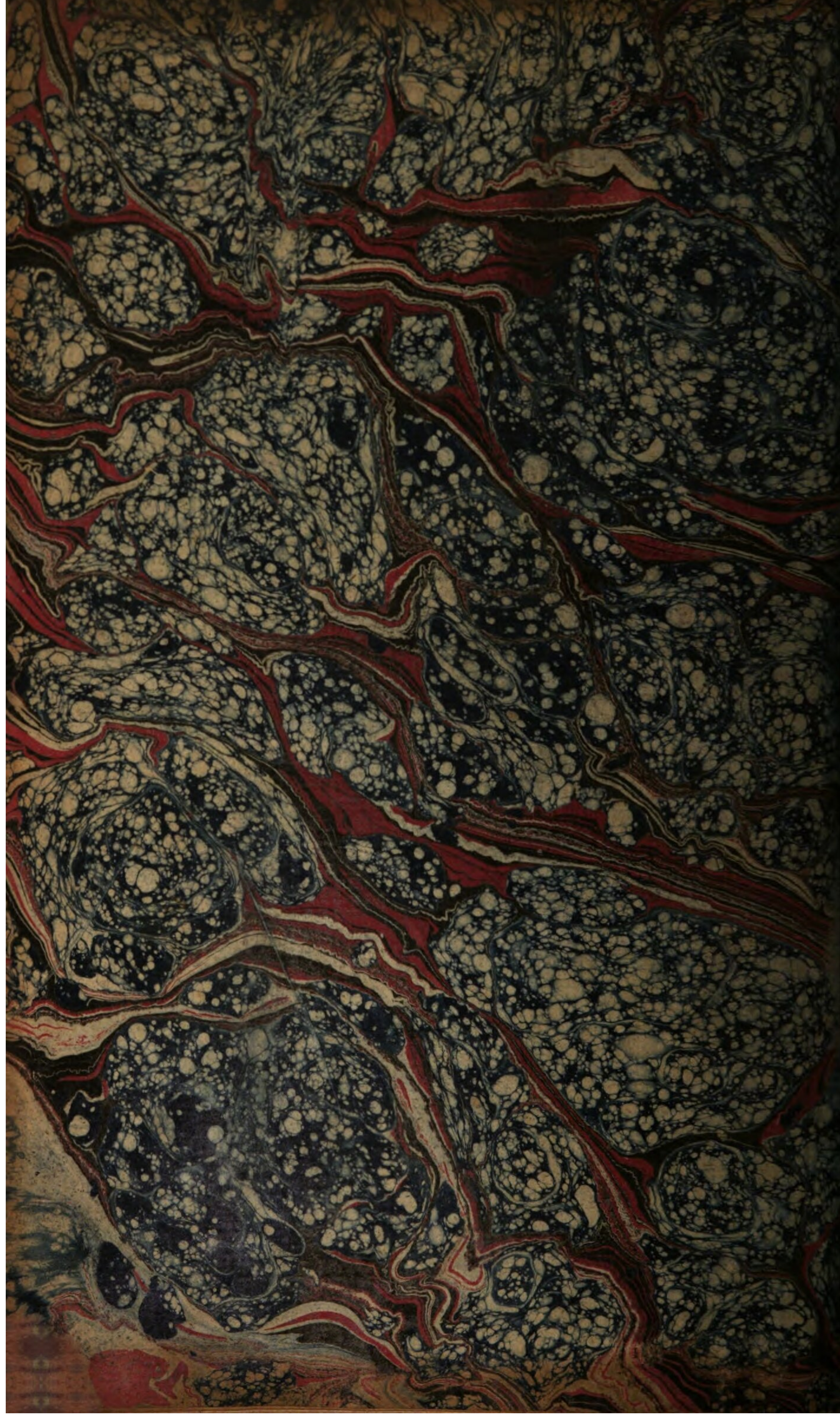
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Stone, Thomas

A Review of the corrected agricultural Survey of Lincolnshire, by Arthur Young Esq. published in 1799 by authority of the board of agriculture together with an address to the board, a letter to its secretary and remarks on the recent publication of John Lord Somerville, and on the

London 1800

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